Online Learning for Monitoring and Evaluation:
A Report Prepared for MEASURE Evaluation

by
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ABSTRACT

Objective: MEASURE Evaluation works to increase the Monitoring and Evaluation (M&E) capacity of the global public health workforce and is expanding their online learning portfolio. This study aims to identify background characteristics of those who have completed MEASURE Evaluation's first online course M&E Fundamentals; determine satisfaction with- and future interest in online M&E courses; establish accessibility and identify barriers to online learning; and provide recommendations as MEASURE Evaluation expands their online learning portfolio.

Methods: An online survey was sent to 2,225 people who completed the online M&E Fundamentals course using Qulatrics survey software. Data was collected over three weeks, and results were analyzed.

Results: The majority of the respondents are young professionals with some graduate education, have consistent internet access, and respond positively to future online M&E courses. Barriers were limited, but include frequent internet "time-outs". Recommendations include developing courses at different learning levels, providing content area certificates, updating courses regularly, providing printable materials, increasing use of case studies, and developing feedback systems between students and instructors.

Conclusion: MEASURE Evaluation is well positioned to increase M&E capacity globally by expanding the online learning portfolio.

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ABBREVIATIONS

CBT	Capacity Building and Training
CBTU	Capacity Building and Training Unit
CoP	Community of Practice
CPC	Carolina Population Center
CPE	Continuing Professional Education
FSNs	Foreign Service Nationals
GHeL	Global Health e-Learning
IRB	Institutional Review Board
M&E	Monitoring and Evaluation
MCH	Maternal and Child Health
MEASURE	Monitoring and Evaluation to ASsess and Use Results
MENTOR	Monitoring and Evaluation Network of Training Online Resources
MSH	Management Sciences for Health
PHNs	Population, Health and Nutrition Officers
UNC-CH	University of North Carolina at Chapel Hill
USAID	United States Agency for International Development

PROBLEM STATEMENT

Online learning is becoming an increasingly important component of training and knowledge sharing for the global public health workforce. This is especially true as training and travel costs increase, budgets tighten, technology improves and internet access becomes more readily available. MEASURE Evaluation's Capacity Building and Training Unit (CBTU) is working to increase Monitoring and Evaluation (M&E) competency among public health professionals working with maternal and child health (MCH) populations around the world, in part by expanding online M&E course offerings. The purpose of the survey described in this report was to identify characteristics of individuals who have participated in MEASURE Evaluation's first online course Monitoring & Evaluation Fundamentals and to learn what barriers and facilitators exist in providing online M&E training to global public health professionals. The survey also aimed to determine participant's access to online courses, satisfaction with previously taken online courses and interest in future distance learning courses. Finally, the survey intended to solicit participant feedback to help guide recommendations for MEASURE Evaluation as future M&E online courses are developed. The survey population consisted of people who completed the online M&E Fundamentals course through MEASURE Evaluation's Monitoring and Evaluation Network of Training Online Resources (MENTOR) website before February 2011 and who responded to the online survey emailed to them that month.

This report serves as the first assessment of participants' access to and opinions of distance learning as a strategy for improving M&E capacity. The report provides background information about the MEASURE Evaluation project, the Capacity Building and Training Unit at MEASURE Evaluation, MENTOR, which is

now referred to as MEASURE Evaluation's online courses, and the M&E Fundamentals online course. A brief review of the literature about online training and distance learning as a strategy for building public health capacity, especially in low resource settings, is followed by survey methods, results, discussion and recommendations. The report will be submitted to the CBTU for consideration as they advance MEASURE Evaluation's distance-learning portfolio. Between the implementation of this survey and the time this report was written, MEASURE Evaluation stopped using the acronym MENTOR for its online training resources. The report uses the new terminology, however some residual references to MENTOR remain in the survey results of this report.

RESEARCH QUESTIONS

Monitoring and Evaluation skills are increasingly important for public health professionals working with maternal and child health populations. As an internationally recognized leader in M&E capacity building MEASURE Evaluation is taking an important step in increasing access to M&E competencies by developing free online courses. It is important to examine participants' satisfaction with MEASURE Evaluation's current online course to determine how MEASURE Evaluation can improve future online courses. The following research questions were developed to guide the literature review and survey development for this report.

(1) What are the characteristics of people who have completed MEASURE Evaluation's online M&E Fundamentals course?

(2) What interests do those who have taken the M&E Fundamentals course have in future online continuing education in M&E?

(3) What accessibility do those who have taken the M&E Fundamentals course have to future online courses, and what are existing barriers?

(4) What can MEASURE Evaluation do to address barriers to online M&E learning and improve satisfaction amongst users for future online M&E courses?

BACKGROUND AND LITERATURE REVIEW

MEASURE Evaluation

MEASURE Evaluation is a project funded by the United States Agency for International Development (USAID), dedicated to supporting and improving M&E in population, health and nutrition, and HIV/AIDS programs globally. Since its inception in 1997, MEASURE Evaluation has consisted of three phases. In phases I (1997-2003) and II (2003-2009) MEASURE Evaluation's work focused primarily on providing technical assistance to, and collaborating with, public health professionals at local, national and international levels to improve local capacity for M&E activities, particularly in Asia, Africa, and Latin America. These activities included, but are not limited to, increasing demand for data for health decision making, improving the quality of new and available data, improving capacity and processes for data collection and analysis, improving usage of data for policy formulation and program planning, and increasing the quality of data used for monitoring program processes and evaluating program impacts.(1) This work was based on the principle that increased use of high quality data for decision making in population, health and

nutrition programs and policy will improve health systems and thus improve health outcomes.

In phase III (2009-present) MEASURE Evaluation continues to work under the same principle in an atmosphere where increased demands have been placed on public health professionals and policy makers around the world to produce and use high quality health information for program and policy implementation. The global health field is increasingly emphasizing the use of quantitative measures for evaluating programs to assure accountability. The objective of MEASURE Evaluation under phase III is "improved collection, analysis and presentation of data to promote better use of data in planning, policy making, managing, monitoring and evaluating population health and nutrition programs."(1) Box 1 shows the vision and mission of MEASURE Evaluation as they achieve this objective.

Box 1. Vision and Mission Statement of MEASURE Evaluation

Vision: Institutions and people empowered to identify, collect, analyze, and use technically sound information to improve global health and well being.

Mission: MEASURE Evaluation provides technical leadership through collaboration at local, national and global levels to advance the field of global health monitoring and evaluation. We build the sustainable capacity of individuals and organizations to identify data needs, collect and analyze technically sound data, and use that data for health decision-making. We create, implement and facilitate state of the are methods for and approaches to improving monitoring and evaluation, health information systems, and data use. We collect, share and disseminate information, knowledge, and best practices in order to support evidence-based decision-making. (1)

Capacity Building and Training Unit (CBTU)

A major component of MEASURE Evaluation's work in improving M&E worldwide is increasing the M&E capacity of local public health workers and organizations to identify data needs collect and analyze quality data and use quality data for evidence based decision making for population, health, nutrition and HIV/AIDS program design and implementation as well as health policy making.

Capacity building activities at MEASURE Evaluation include four main components as indicated in Box 2.(2)

Box 2. MEASURE's four main components of Capacity Building:

1. Field based technical assistance to strengthen capacity of national and sub-national organizations responsible for M&E.
2. Partnerships with selected regional universities and training centers in developing countries for offering workshops and masters level courses on M&E topics and strengthening their capacity to conduct M&E activities.
3. Production of learning materials and online courses on M&E, made available for public use.
4. Participation in working groups, which seek to harmonize capacity building strategies, approaches and tools across international agencies and donors. (2)

MEASURE Evaluation's CBTU works with selected regional universities and institutional training partners in Asia, Africa and Latin America to design and implement masters level M&E concentrations in masters of public health programs and provide fellowships to qualified students in these M&E masters degree programs. They also work with in-country partners to administer regional and country level M&E workshops in at least eight countries including South Africa, Ethiopia, Ghana, Nigeria, Senegal, Burkina Faso, India and Mexico.(3) Partnerships currently exist with Instituto Nacional de Saluda Publica (INSP) in Mexico, Centre Africain Edudes Superieures en Gestion (CESAG) in Senegal, University of Pretoria (UP) in South Africa, the Public Health Foundation of India (PHFI) in India and Addis Ababa University (AAU) in Ethiopia. From 1999 – 2009, MEASURE Evaluation also partnered with the Institute for Population and Social Research at Mahidol University in Thailand to provide masters programs and workshops in Asia.(4) Field-based technical assistance to national and sub-national organizations is continuous across MEASURE Evaluation's program activities and includes ongoing communication and follow-up with workshop and masters program graduates. The CBTU has also taken advantage of online media for furthering capacity building by making materials for trainers available free of charge on the MEASURE Evaluation website. These

training materials, some of which are translated into Spanish, Portuguese and French, include learning modules on Basic M&E Concepts, Data Analysis, M&E of HIV/AIDS programs, Routine Health Information Systems, M&E of Population, Health and Nutrition Programs, M&E of Tuberculosis Programs, M&E of Constructive Men's Engagement Programs, and M&E of Gender-Based Violence Prevention and Mitigation Programs.(5) Publications and Toolkits are also made available free of charge on the MEASURE Evaluation website. In 2011, MEASURE Evaluation included the Virtual Leadership Development Program and Virtual Strategic Planning Program, which provide public health organizations and teams the opportunity for blended online and remote onsite learning opportunities to increase their collective M&E capacity. These blended capacity building training programs are still very new and warrant future assessment.

MEASURE Evaluation's Online Courses

A growing component of the capacity building portfolio at MEASURE Evaluation is online learning. Originally called the Monitoring and Evaluation Network of Training Online Resources (MENTOR),(6) MEASURE Evaluation offers free online courses to anyone who registers on MEASURE Evaluation's online course website. In February 2007, MEASURE Evaluation launched its flagship e-learning course titled M&E Fundamentals. Since then, additional online, interactive mini-courses have been developed including a French translation of the M&E Fundamentals course and a course titled Geographic Approaches to Global Health. Each of these offers a certificate upon completion of the course. Non-Certificate courses created by the Carolina Population Center (CPC) have also been added to the MEASURE Evaluation website as resources. These non-certificate courses

include The PLACE course, Multiple Decrement Life Tables, and Population Analysis for Planners. MEASURE Evaluation's online course website also links users to the Global Health e-Learning Center, as many of the M&E related courses available at the Global Health e-Learning Center were developed in collaboration with MEASURE Evaluation staff. Multiple translations of the M&E Fundamentals course and additional online courses are being developed with the intention to launch these additional online courses in late 2011.

MEASURE Evaluation's M&E Fundamentals Online Course

The purpose and objectives of the M&E Fundamentals online course are presented in Box 3. The course is an interactive self-instructional mini course with concise information on the basics of M&E, which was launched in February 2007. It is divided into distinct modules, each of which includes pre- and post-session quizzes, interactive exercises, a glossary of terms, resources and references for additional information.(7) To participate in the course, one must first create an account login name and password, providing MEASURE Evaluation with a list of participant names and email addresses. At the

Box 3. Overview of M&E Fundamentals Online Course (last updated: January 2007)

Purpose:

Monitoring and Evaluation (M&E) is an essential component of any intervention, project, or program. This mini-course covers the basics of program monitoring and evaluation in the context of population, health and nutrition programs. It also defines common terms and discusses why M&E is essential for program management.

Objectives:

At the end of this course, you will be able to:

- Identify the basic purposes and scope of M&E
- Differentiate between monitoring functions and evaluation functions
- Describe the functions of an M&E plan
- Identify the main components of an M&E plan
- Identify and differentiate between conceptual frameworks, results frameworks, and logic models
- Describe how frameworks are used for M&E planning
- Identify criteria for the selection of indicators
- Describe how indicators are linked to frameworks
- Identify types of data sources
- Describe how information can be used for decision-making (7)

end of the course, and upon completion of the final exam, participants scoring 80% or higher are eligible to download and print a course certificate.

As of February 2011, more than 2,000 people have completed the online M&E Fundamentals course. This paper is the first assessment of the participants who have completed the course and provided their email addresses to MEASURE Evaluation in order to access their course certificate.

The exact same course is also available in French and English on CD-Rom and on the Global Health e-Learning website as of 2007. Access to the course via the Global Health e-Learning site however, is not monitored by MEASURE Evaluation. Surveying participants who completed the course via any mechanism other than the MEASURE Evaluation website is not possible at this time.

Literature Review

A review of the literature was conducted keeping the initial study questions in mind. Since the study questions focus specifically on MEASURE Evaluation's M&E online trainings, the literature review was conducted looking specifically for examples of online learning for public health professionals related to M&E. The goal of the literature review was to find examples of studies that assessed satisfaction with online learning and identify recommendations to improving online learning as well as identify barriers to online learning for public health professionals. The Global Health e-Learning Center was also reviewed as an example of e-learning for global public health professionals.

Review of Online Learning Surveys and Recommendations

In the past decade, online learning has been shown to be an effective method for conveying information to workers in the health care related fields.(8-10,13,14)

During a review of the literature, however, no specific studies were found that examined online training methodologies or satisfaction for public health professionals in developing countries with a specific focus on transferring M&E skills. Some studies were identified that more generally examined online learning for public health professionals, and many of them provided recommendations to improve online learning satisfaction.

One such study in the United States evaluated online learning used to train maternal and child health professionals in increasing skills for data collection, and using data for program monitoring and evaluation.(8) The researchers found, through an “end-of-tool” survey, that participants in the online training courses found the training useful and planned to use their newly gained, or refreshed, skills in their future work. The majority of their respondents said that the tools had improved their knowledge and increased their confidence in using the skills they had learned in the online trainings. They also “expressed appreciation for the activities, quizzes and examples that were part of each tool.”(8) An Australian continuing professional education program (CPE) for health care professionals was assessed and found that online learning was an effective means for increasing healthcare professionals’ knowledge and improving their practice performance.(9) Participants of the study indicated that “web-based education will be effective when the course allows the learner the opportunity to apply the new knowledge to clinical or question-type responses.” They also indicated that breaking information into “learner managed components” was favorable, that web-based education is more effective when immediate feedback is provided and that self-pacing is beneficial for learning.(9) Additionally, a study conducted in England found that e-learning was able to save

healthcare company money in terms of training and continuing education costs; however they also recognized that employees using the e-learning strategies needed protected time for e-learning. They found that blended learning strategies where students learned online but also had access to face-to-face meetings were the most successful training strategies, and also found that virtual communities of practice (CoPs) were useful to help e-learners receive answers to their questions.(10)

Barriers to Online Learning

Much has been written about the barriers to online and distance learning. Some of these barriers include student characteristics, enrollment trends, retention rates, time to devote to online learning, instructors familiarity with online teaching (11) and access to adequate computers and internet. Although traditional students, when given the choice, would rather opt for classroom learning instead of online courses, current university structures around the world cannot accommodate the demand for higher education. In low resource settings, where the options are either no education or online education, people will opt for the online option. Distance learning is student centered, and therefore knowing the characteristics of online learners is extremely important for online course development.(12) Especially in free access courses, the previous education of participants can vary drastically; therefore, developers of online courses must walk a fine line of providing basic enough background information without being too basic and thus uninformative.(12) Another well-documented barrier is online courses scheduling and timing. While distance learning is generally something that can be done on a person's own time, they must still have time in their schedules to access computer-based courses. The

students who opt for online courses are generally working full time and therefore have limited time to spend on online education. Retention rates for extended online courses or degree programs are also lower than those for more traditional degree programs. Additionally, online learning requires faculty members and instructors to adapt to new technologies, teaching methods and goals as well as figure out new ways to prompt interactions between students and with instructors.(11) A challenge of online learning is that tutoring and identifying students in need of additional help can be a significant challenge.(12) Alienation and lack of feeling part of a group can also take away from the learning experience for online learners. By the nature of the learning being ‘distant’ much of the social interaction is taken away from the learning experience.(12) Furthermore, there is an increased emphasis in competency building rather than course completion; however online competency measurement is still difficult.(11) The final challenge found in much of the literature on distance learning is in keeping information presented in distance learning courses fresh and up to date.(12) Because so much time and energy goes into developing and integrating online course materials into online platforms, updating information presented in these courses can be burdensome. Thus many courses are left without being updated longer than they should.

While distance and online learning has been shown to be effective in the United States and other highly developed countries where internet access is ubiquitous, the question remains how useful these technological advances are for providing information to health care professionals in developing countries, where access to information through the internet seems less feasible. Additional concerns for online learning exist in the in Global Health world. Distance learning is becoming

more common for clinical training in developing countries; however, consistent internet access is often a problem for many health care professionals in middle and low-income countries. Many of the articles written about other barriers for distance learning in international settings focus on clinical distance learning programs, but some of the lessons also apply to global public health. When considering distance learning for global health, an added challenge in developing course content for international audiences is the challenge of not making the information too context specific.(13) A balance is needed in providing specific contextual examples with providing examples that can be broad enough to provide learning opportunities to people in a wide variety of contexts. Cultural competency is also an important value of public health; however, cultural competence differs in different parts of the world. When developing distance learning courses, cultural and language barriers must also be considered.

Despite Barriers e-Learning is Promising

The Bulletin of the World Health Organization published a Policy and Practice brief in December 2007 stating that free and open-source materials available on the internet have the potential to improve public health capacity in low and middle-income countries around the world.(14) It has been well publicized that the global public health workforce is facing a serious shortage of educated public health practitioners in low and middle-income countries. Public Health Universities in developing countries are simply unable to provide education to all of the people in need of Public Health training. For example, it has been estimated that India needs 10,000 people with MPH degrees each year for the next ten years, but the resources limit the number of placements available in traditional face-to-face training

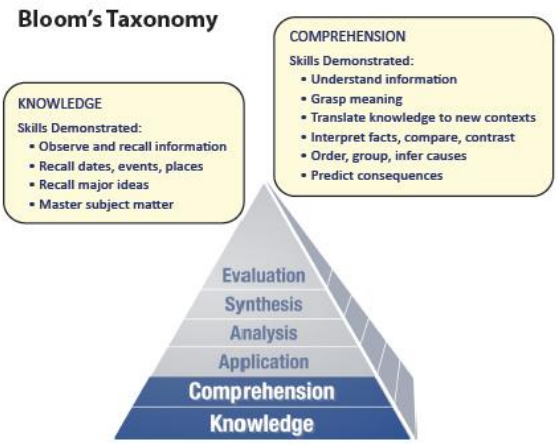
programs.(14) Geographic, financial and logistical barriers prevent in person training for all of these workers, so alternatives are desperately needed.

Despite the aforementioned barriers, distance learning is a viable option for those needing access to continuing education. Through new technologies like e-learning, many students can gain access to much needed education. New technologies also pose promising solutions to many of the barriers previously identified. For example, through online meeting platforms and discussion boards, students in online courses have the ability to meet in virtual face-to-face modes through audio and video conferencing, providing opportunities to discuss ideas with each other or with professors in real time.(12) Additionally, online communities of practice (CoPs) have become more common, providing new platforms for social or work-related interactions between individuals in an online setting. These new technologies help to circumvent some of the alienation and lack of personal immediate interactions that are common complaints about distance learning programs. Online learning will continue to grow and the Global Health e-Learning Center is a great example of online learning tailored to the global health workforce.

E-Learning for Global Health

The Global Health eLearning Center (GHeL) is one example of the efforts USAID and specifically the Bureau of Global Health is putting forward to increase access to technical information to USAID Population, Health and Nutrition officers (PHNs) and Foreign Service Nationals (FSNs) in the field.(15) According to USAID, PHNs and FSNs had expressed interest in remaining current in global public health topics, however because of time and resource constraints have found it difficult to obtain current information in a timely and usable manner. Contracting with

Management Sciences for Health (MSH), USAIDs Bureau of Global Health has developed the Global Health eLearning Center to fill this gap between access to and need for continuing education and “provide timely continuing education for health professionals; offer state of the art technical content on key public health topics; and serve as a practical resource for increasing public health knowledge.”(15) The site now has 40 global health and development related courses with more than 53,000 registered users. The Global Health e-Learning Center also makes nine certificates available to users who complete a series of online courses in a specific topic area. This helps learners focus their course choices to gain deeper understanding of specific topics.



The GHeL Center online courses use Bloom’s Taxonomy as a foundational learning theory and include checkpoints throughout the courses at which students take pre- and post-tests. The courses all end with a final exam to test comprehension and knowledge gained during the one to two hour courses. Case studies and country examples are provided whenever applicable to help learners see how course principles are applied in the field. The courses are each separated into sections, and participants have the ability to print the course content in sections or in their entirety. To date, the most popular of the 40 courses available include HIV Basics, M&E Fundamentals, Malaria, Antenatal Care and Diarrheal Disease.(16) MEASURE Evaluation staff regularly contribute to courses that appear on the Global Health e-Learning Center. As of March 2011, courses on the e-Learning Center for which

MEASURE Evaluation staff have contributed technical content include: M&E Fundamentals, Geographic Approaches to Global Health, Data Quality, Data Use for Program Managers, Economic Evaluation Basics, M&E Frameworks for HIV/AIDS Programs, and PEPFAR Next Generation Indicator Guidance.(17)

METHODS

The study was submitted to the Public Health and Nursing-Institutional Review Board (IRB) at the University of North Carolina at Chapel Hill and was deemed exempt from requiring IRB approval as study number #11-0114.

The survey was developed by the author of this paper, a student in the Department of Maternal and Child Health at the University of North Carolina at Chapel Hill, Gillings School of Global Public Health. After reviewing current literature about distance learning for continuing education of public health professionals with a focus on developing countries, the survey tool was built. No sample surveys on the topic, specifically related to distance learning for M&E professionals or public health professionals in developing countries were found in the literature. Therefore, the student developed most questions specifically for this survey. Previous reports written for MEASURE Evaluation on other capacity building functions were consulted. Some applicable questions from previous surveys were used in this survey in order to make future comparisons between study groups possible.

The survey questions were organized into sections related to participant background characteristics, educational experiences and country, access to computers and internet connectivity, including audio, video and flash player capabilities, considerations for future continuing education, previous online learning experiences and current employment. The survey questions were developed by the

student and approved by staff in the CBTU at MEASURE Evaluation. A complete copy of the survey questions is available in Appendix A of this report.

After the final survey questions were developed and inputted into the online survey software Qualtrics, four staff members at MEASURE Evaluation and five graduate students pilot tested the survey and provided feedback on clarity of wording and functionality of the online survey. The backgrounds of those in the pilot test were varied. One was a psychology PhD candidate who specializes in survey development and the remaining four were Masters of Public Health candidates, two of whom were Nigerian clinicians.

The survey was emailed to 2,225 potential respondents using Qualtrics' panel data function on February 10, 2011. Participants were identified based on their completion of the online M&E Fundamentals course on MEASURE Evaluation's MENTOR website. Participation in the online course requires participants to create a login account by which they provide MEASURE Evaluation with their current e-mail address. These e-mail addresses are stored in a database available to the CBTU at MEASURE Evaluation. As such, the CBTU has an e-mail list for all participants who completed the course. The e-mail database was cleaned to remove duplicate, incomplete and obviously incorrect addresses. A census was taken of all participants in the M&E Fundamentals e-mail database. A census was done because previous follow-up activities in the CBTU at MEASURE Evaluation indicated that response rates to an online survey might be low, especially considering that the participants taking the online course have no continuous contact with MEASURE Evaluation staff and therefore may have little incentive to complete the survey.

An initial e-mail with the survey link was emailed to all participants with valid e-mail addresses on Thursday, February 10, 2011. The initial e-mail requested the survey be completed by Friday, February 25, 2011. This time frame of two weeks was thought to provide enough time to allow everyone who would complete the survey enough time to access and complete it before the survey closed. Reminder e-mails were sent through Qualtrics' panel data function on Tuesdays and Thursdays to any participants who had not yet completed the survey. While the participants were told that the survey data collection ended on February 25th, some participants continued to e-mail the survey administrator after the end date indicating that they had just accessed their e-mails for the first time and requesting permission to compete the survey despite being late. The data reflected in this report includes data from those participants, provided they responded to the survey by the extended data collection close date of Friday, March 4, 2011. This was an extension of one week. The data was analyzed by the author of this report and is provided in the following results section.

RESULTS

The response rate for the survey was approximately 39%. Of the 2,200 people eligible to take the online survey, 868 people agreed to complete the survey by the end of the extended data collection period. Only four refused to participate after reading the informed consent.

Background Characteristics

Sixty seven percent (67%) of the respondents identified themselves as Male and more than half (54%) reported being between 25-34 years of age. Table 1 presents the age distribution of the participants. Respondents came from all over the world; however, the most commonly cited country of current residence was Nigeria with 120 participants, representing 14% of the respondents. Other countries commonly cited were Kenya (14%,n=114), United States (8%,n=65,), Uganda (8%n=64), Tanzania (7%,n=56), Ethiopia (6%,n=47), Zambia (4%,n=31), India (3%, n=23) and South Africa (2%, n=20).

Table 1: Participant Age Distribution: What is your age?

#	Answer	Response	%
1	younger than 18	0	0%
2	18 - 24	34	4%
3	25 - 34	472	54%
4	35 - 44	262	30%
5	45 - 54	75	9%
6	55 - 64	21	2%
7	65 or older	4	0%
	Total	868	100%

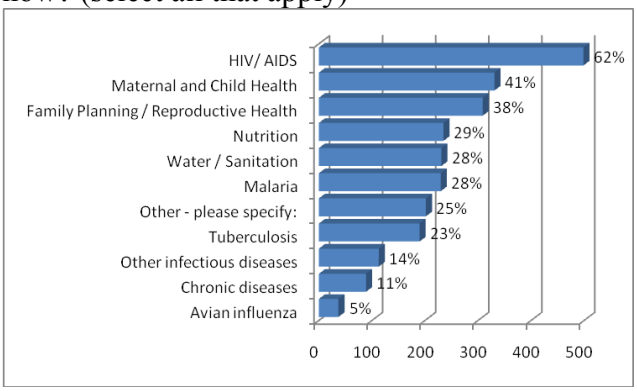
When asked about their employment status, many (69%, n=600) reported that they are working full time, 17% (n=147) are primarily working but also taking classes part time, 6% (n=53) are not currently employed, 4% (n=34) are full time students, and the remaining 4% (n=31) are primarily students but also working part time. The majority (32%) of the respondents work for international Non-Governmental Organizations (NGOs). Others work for local NGOs (14%), National Governments (11%), United Nations Organizations (9%), Academic Institutions

Table 2. Which of the following choices best describes your current employment status?

#	Answer	Response	%
1	Not currently employed	53	6%
2	Student (full time)	34	4%
3	Primarily a student but also working part time	31	4%
4	Working (full time)	600	69%
5	Primarily working but also taking classes part time	147	17%
	Total	865	100%

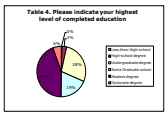
(7%), USAID cooperating agencies (6%), or Research/Policy Institutions (5%). The respondents' work focused on a variety of populations, particularly HIV/AIDS, MCH and Family Planning/Reproductive Health populations as depicted in Table 3. They also represent a variety of employment levels: M&E officer (18%), M&E specialist (14%), General Staff (12%), Head of department for an institution / organization (11%), among others.

Table 3. Which area of health or specific populations are most relevant to the work you do now? (select all that apply)



Education

Forty-four (44%) percent reported their highest level of completed education as a masters degree, while 28% held an undergraduate degree, 19% had completed some graduate school, and 6% held a doctorate degree.



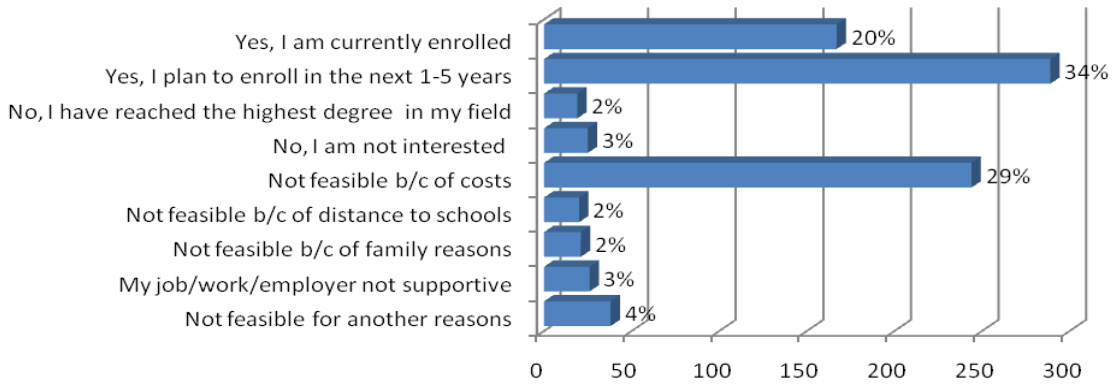
Interestingly, when participants were asked where their highest level of education was completed, the number of participants who reported completing their degrees in one country differed from the number of respondents who reported current primary residence in that same country. This points toward the well-documented tendency for professionals in developing countries to seek education in more developed countries due to limited educational opportunities at home. For example, 5% (n=44) respondents reported completing their highest level of education in the UK, however

only 1% (n=6) reported the UK as their primary residence. For the US and South Africa, similar trends were seen where 10% of respondents (n=88) reported completing their education in the US and 4% (n= 33) in South Africa, while only 8% (n=65) were currently residing in the US and 2% (n=20) counted of South Africa as their primary residence. Kenya (n=108), Tanzania (n=43), Uganda (n=58) all saw fewer participants reporting receiving their education in the country compared to the number who reported each of those countries as their primary residence.

Continuing Education

When asked, “Since receiving our highest degree, have you considered returning to school for a degree higher than the one you currently hold?”, 20% replied “Yes, I am currently enrolled” and 34% responded “Yes, I plan to enroll in the next 1-5 years”. (Table 5) Twenty nine percent, however, responded that they would like to, but it is not feasible because of costs. Others reported that it was not feasible because their job/employer is not supportive (3%). Some reported that it is not feasible because of distance to schools (2%) and still others responded that it is not feasible because of family reasons (2%). Four percent (4%) of participants reported that there were other reasons as to why continuing their education would not be

Table 5. Since receiving your highest degree, have you considered returning to school for a degree higher than the one you currently hold?



feasible. These included combinations of two or more of the previously mentioned barriers (i.e. costs and distance) as well as other specific barriers. Comments included “The current economy and earning power in Nigeria”; “I am working in Somalia where there is no good education”; “I would have to figure out what I’d like to study”; “Lack of an M&E masters course in Kenya”; “I did but was not able to finish on time”; “I tried to enroll but declined by the University” and “My work requires me to travel very often”.

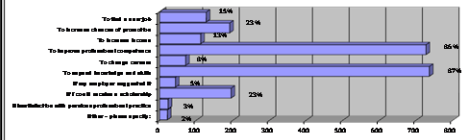
Participants were given the option to provide their top three reasons for what would encourage them to enroll in a higher degree program. Eighty two percent (82%) of respondents chose “to improve professional competency”, 80% chose “to expand knowledge and skills”, and 43% chose “if I could receive a scholarship”. Only two percent (2%) selected “dissatisfaction with previous professional practice”.

Most respondents (73%) indicated that if an online degree program were available to them, they would consider getting their next degree through an online program. Only ten percent (10%) said they would not be likely or would definitely not be likely to apply for an online degree program.

People responded even more positively to online continuing education credits or professional workshops in M&E. Eighty four percent (84%) said they would be very likely to take M&E continuing education credits or professional workshops (not related to a degree program) through an online program. An additional 14% said they would be somewhat likely to take these types of online courses, while only 2% said they would not be likely to do so. When given the same option to provide their top three reasons for what would encourage them to enroll in an online (non degree) M&E course, participants gave the same reasons as for what would encourage them

to apply for higher degree programs (Table 6). Eighty six percent (86%) of respondents chose “to improve professional competency” 87% chose “to expand

Table 6. What reason would encourage you to take an online M&E course (not degree program). Please select your top 3 reasons.



knowledge and skills”. A smaller percentage (23%) chose “if I could receive a scholarship” and 23% also selected “to increase chances for a promotion”. This latter option had received 21% of the respondents’ motivations in the previous question. Only 13% of the participants selected “to increase income” as a motivation for taking online M&E courses, while 28% of the participants selected “to increase income” as a motivation for in choosing higher education programs. Other reasons people indicated that might encourage them to take an online M&E course included: “to apply updated knowledge for the M&E systems that I am currently working on”; “if and only if [it were] impossible to enroll for a degree directly”; “to recommend to my staff”; “to perfect my skills in M&E”; “allows one to work and study without having to be away from work”; “free of charge, so I can afford it”, “to stay aware of the latest methods and keep learning”. Overall, 99% of the respondents indicated that they would participate in short courses or workshop trainings in M&E in the future if they were available online.

Internet and Computer Access

Of the 822 respondents who answered the question, 96% indicated that they had access to a computer with internet at work, while 79% said they do at their home, 56% on a mobile device, 27% at school, 50% at internet cafes and 24% at libraries. When asked where people access a computer with internet most often, on average respondents reported using the internet at work 60% of the time and at home 25% of the time. Other places where people access the internet are at the gym, with friends, and while traveling at airport lounges. The majority of the respondents (84%) use the internet on a daily basis, while 15% use it 4-6 times per week. Only one percent (1%) uses it once per week, and almost nobody reported accessing a computer less often than once per week. Of those using the computer, 46% reported that, on a regular day, they usually spend about eight hours or more at the computer and 35% said they use the computer between four and eight hours a day. Only 18% reported using a computer less than four hours per day on a regular basis. Table 7 shows how often people reported being away from their computers for more than four days in a row. However, the majority (78%) said that they usually bring a computer with them when they travel. As the

Table 7. How often are you away from your computer for more than 4 days in a row? This can include any reason that you might not be able to use your computer including but not limited to travel, extended power outages, computer maintenance, etc.

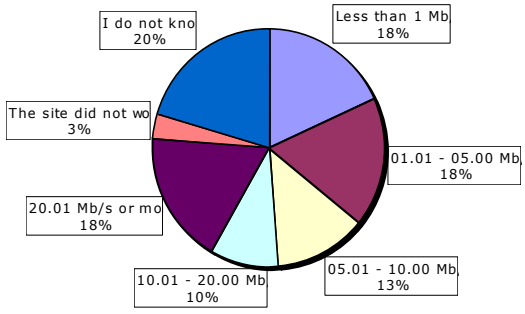
#	Answer		Response	%
1	Never		181	21%
2	Less than once per year		109	13%
3	2-4 times per year		171	20%
4	5-11 times per year		79	9%
5	Once per month		80	9%
6	2-3 times per month		97	11%
7	Once per week		130	15%
	Total		847	100%

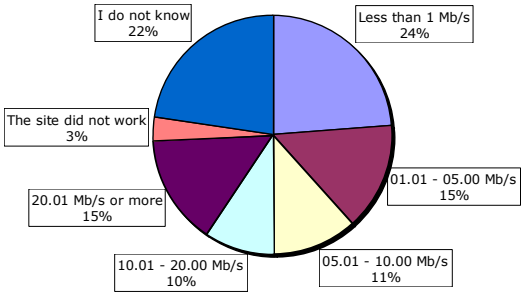
responses show, these respondents are usually at their computers, but 36% are away from their computers at least once per month.

When asked about the internet connection used most often, the most commonly used type of internet connection reported by users was a Digital Subscriber Line (DSL) (28%). Satellite (15%), Fiber optic (13%), Dial-up, (10%), Cable (10%), and Cell/Mobile Phone (8%) connections are also somewhat frequently used.

As is expected in developing countries, respondents did report that the internet connection is not always reliable. Twenty three percent (23%) reported that their connection times out between two and three times per day. Nine percent (9%, n=83) reported that their internet connection times out at least one time per hour and 61% of those said it was four or more times per hour. It would be important to determine the differences in this connectivity between developed and developing countries, as those in developing countries likely have less consistent internet connectivity but also are likely in greater need of online courses due to barriers in accessing in person workshops. The majority of participants (91%) do have audio abilities on their computer. Fewer, but still a majority have video (84%) and Flash media (80%) abilities on their computers. Internet speed is also an important

Table 8. Download Speed (n=809) Upload Speed (n=746)



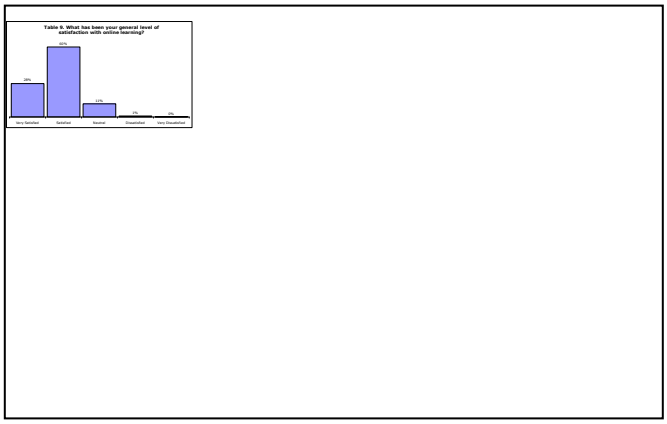


consideration when it comes to e-learning functionality. Of the 809 participants who responded to the question, less than one fifth had internet download speed of slower than one megabyte per second and less than one fifth had faster than 20 megabytes per second internet speed (Table 8). Participants reported being satisfied with their internet speed, as more than 53% rated their level of satisfaction as a seven or higher on a scale of 0-10 and only 13% rated their level of satisfaction as three or lower on the same scale.

Exposure to Continuing Education Courses in Classrooms vs. Online

The majority of the respondents (71%, n=604) reported having taken a continuing education/professional development courses in a classroom since their highest level of education. Sixty nine percent (69%) of those respondents participated in classroom workshops related to M&E and 28% said their classroom continuing education was not related to M&E. Topics covered in continuing education which happened in classrooms/ in person formats ranged and included such varied topics as: Social Work, project management, data management, Masters in Business Administration, MIS – Prevention of Mother to Child Transmission of HIV, policy development, proposal writing, marketing, Socio Economic and Gender Analysis (SEAGA), appreciative inquiry, training of trainers, computer packages, statistical software packages, and much more. Many of the courses were specific to M&E including topics like, M&E of HIV/AIDS, Project M&E, Implementing and Evaluating Health Projects. Many of MEASURE Evaluation's in person regional workshops were mentioned when people indicated which trainings they had taken part in related to M&E.

Less than half (45%, n=381) of the respondents have taken any continuing education or professional development courses or workshops (not including the MENTOR M&E fundamentals course). Of those who had, many of the respondents (58%, n=223) said that the online course they took was related to M&E. The Global Health e-Learning courses were mentioned as a common source for access to online courses related to M&E. M&E Frameworks, Project Design, Project Management, M&E Frameworks for HIV programs, M&E in the NGO Sector, Results Focused Project Design, Monitoring Framework Approach and USAID PEPFAR were some of the M&E related topics covered in M&E online courses that were listed.



A majority of the participants (88%) were satisfied or very satisfied with online learning in general (Table 9) and many suggestions were given for improving the quality of online learning through MEASURE Evaluation. Some comments are highlighted it Box 4, and a full listing of these comments are available in Appendix B.

When asked to rank the following components of learning in order of most important to least important for continuing education, the respondents ordered the components in the following manner: (1) course content, (2) instructor's experience, (3) interaction with an instructor, (4) interaction with fellow students, (5) entertainment/presentation quality, (6) technical support, and (7) other. Other components that were considered important included: Cost, learning environment,

availability of reading and training materials, handouts and reference materials, duration of study, frequency and flexibility of trainings, self assessments and quizzes, frequently asked questions, instructor feedback, follow up mentorship for students, current information, field experiences, completion certificates, audio and video, and hearing about other people's experiences.

Box 4. What Comments or suggestions do you have for improving the quality of online learning on MENTOR in the future?

- More updates needed
- Advanced level should be added for upgrading new knowledge and skills
- Include application and offer advanced courses
- Provide a larger variety in courses
- Option for questions to be asked or clarified via email
- Give more case studies
- Increase learners interactions with each other
- It was too short
- Combine media, audio, visual etc.
- Include a learning module to learn about statistical packages like Epi Info
- I am very satisfied with the mentor online course. I suggest more detailed reference materials be presented
- I suggest the program can better be enhanced by allowing high profile universities award certificate for the program. I mean the awarding institution should find its name on the certificate or diploma that may be awarded at the completion of course
- Give assignment to participants to perform outside of the course and report on it. Make it compulsory as the way to move forward with the course to measure their commitment and progress.

The things that were considered most important to participants when learning were, in order of most important to somewhat important were: See lecture slides, Print module with all lecture notes, print lecture slides, ask questions in real time, hear the instructor, and read what the instructor is saying (when lecture is in an audio format). Less important, but still important were being able to view videos related to course materials, moving at one's own pace, communicating (online) with other students, and being able to see the instructor in a video format. Less important was having a picture of the professor. Other comments on factors important to students as they learn included: receiving feedback and critiques from the instructor, share practical experiences in M&E with the instructors, access to a tutor (online or in person), being able to ask questions, having better internet connection, availability of a CD or DVD, relevant real life examples, illustration points, working examples, as well as

materials that can be used to teach the concepts to other colleagues. In regards to logistics, many participants made the point that it is important to be able to start back where one has left of if internet connection is interrupted or if one needs to stop and come back to a learning module for some other reason. People also expressed the need to receive course materials in advance to be able to preview information. Other factors that were expressed as concerns were the timing of online workshops or online real time meetings because of differences in time zones. People also brought up the need for accredited certification or internationally accepted recognition for completing online courses or workshops so as to be able to add these courses to one's Resume or Curriculum Vitae.

M-Learning, Virtual Worlds and Online Meetings

About half (46%) of the participants had heard of M-Learning (described in the question as: Mobile Learning referring to learning using mobile devices like hand held computers, mobile phones, MP3 players etc.) but had never used M-Learning. Approximately the other half (46%) had never heard of M-Learning at all. Only eight percent (8 %,n=62) reported using M-Learning and described very varied experiences including: Medical quick reference for primary care attention, Rosetta Stone on laptops and I-phone language courses, data collection using remote sensing PDAs, using phones to read notes and exam questions or browse the internet, to receive school or other lectures on an MP3 player or I-pod/phone, in USAID education projects to relay digital messages to remote schools, Voxiva service used in a clinical trial through which SAE (serious adverse event) alerts were transmitted and using laptops to receive instructional materials. Most (88%) of those who reported using M-Learning described it as an effective method for learning.

Similarly, about half (43%) of the participants had heard of Virtual Worlds in learning which was described in the question as a strategy that uses concepts of virtual gaming to teach information to students in an interactive format which would otherwise be difficult to recreate due to cost, scheduling or location. Half of the participants had never heard of this format for learning (50%). Of those who had used it (7%), almost all (95%) found it an effective method for learning. Those who used this strategy described their experiences in various ways. A few mentioned using virtual class room for their highest education including online class discussions, some said they were currently or had been enrolled in virtual classrooms through eCornell and Freer United Kingdom and using satellite classrooms while enrolled in other Universities. One person mentioned “Telehealth” and video conferencing, another e-symposiums, and a few mentioned the Virtual Leadership and Development Program where instructors and students interact using a forum. Other participants mentioned e-learning, using the internet, Google and Wikipedia and other search engines for research, or using compact discs (CDs) for learning.

Many participants had some experience with various online meeting platforms. Most people had used Skype, some had used Adobe Acrobat Connect but only very few had used Microsoft Office Live Meeting, Eliminate Live, or GoTo Meeting. In general those who had used Skype were satisfied with the meeting platform, while those using Adobe Acrobat Connect were mixed between neutral and satisfied. Other software that the participants mentioned having experience with included Blackboard, Facebook, Yahoo, Google-Talk, Google-Docs, Google-Chat, Yahoo Messenger, Team Viewer, Webex, video conferencing, Teleconference,

webinar, Liverpool Laurerate online and Implementing Best Practices (IBP) Knowledge Gateway.

DISCUSSION & LIMITATIONS

This survey data has provided some important information about our study questions. First, we know more about the background characteristics of the people who have taken MEASURE Evaluation's online M&E Fundamentals course. A majority of the participants are young, 25-34 year old, professionals who are working full time, mostly for NGOs. Nigeria and Kenya were the two countries with the largest proportion of respondents to this survey, and we found that some people were educated in countries with elevated access to higher education, like the United States and the UK, and moved to lower income countries to work, indicating a need for better access to education. Additionally, we found that the respondents work predominantly with HIV/AIDS, Maternal and Child Health and Reproductive Health and Family Planning populations.

With regards to our second study question, we were able to determine that a majority of those surveyed are interested in participating in additional online courses in the future. Almost all (88%) of those surveyed were satisfied or very satisfied with online learning. The large majority (84%) of respondents said they would be willing to take online continuing education credits or workshops and almost three quarters (73%) said that they would consider getting their next degree through an online program if it were available to them. Overall, almost everyone (99%) said they would participate in short courses or workshop trainings in M&E if they were provided online.

Additionally, with regard to the third question, we were able to determine that for the most part, participants did indicate that they have regular access to the internet. The majority of respondents access the internet at work (96%) and three quarters (79%) access it at home. Half indicated that they are not away from their computer for more than four days in a row or for more than four times each year. This indicates good accessibility to online learning resources. As intended, the survey also highlighted some barriers to online learning, such as the fact that internet connections in developing countries time-out relatively frequently, and the fact that the M&E fundamentals course was challenging for some but too basic for others, indicating a need for online learning courses to vary in difficulty level. Recommendations follow in the next section, but first a short discussion on the limitations of this survey is necessary because some of the barriers to online learning are likely under represented due to some of these study limitations.

One of the major limitations of this survey was due to the nature of the participant recruitment and data collection. This survey only reflects the opinions and experiences of those who have already accessed online information on M&E and have been motivated to take the M&E Fundamentals course. It also only represents those who were online, accessing email and able to respond to the survey when it was emailed to them and within the allotted data collection period. The results are therefore biased towards people who were at their computers and able to access the internet regularly. We can assume that not all program staff that could benefit from online M&E learning materials have as consistent access to internet connections and computers as are reported in the survey findings. During the month between the close of the survey data collection and when this report was written, many potential

participants emailed the survey administrator indicating that they would like to participate in the survey, but had not had access to their emails during the three weeks of survey data collection. To get a better idea of the true barriers of access to computers and feasibility of online learning for M&E staff in low resource settings, a non-computer based data collection strategy would likely need to be employed. Internet connectivity will continue to be a barrier to online learning in developing settings.

Additionally, we only had a response rate of about 40%, and though a low response rate was expected, it is impossible to know for sure all the factors that lead to this low response rate. While it does not seem likely the survey was sent to any incorrect email addresses (we received no bounce backs), we cannot know for sure how many e-mail addresses were sent to inboxes that are no longer the primary e-mail for our target audience. Another limitation is that this survey was only administered to people who completed the M&E Fundamentals course online, and therefore only gives responses from people who were motivated to complete the course. It would have been interesting to compare the answers of those who completed the online course to those who started M&E Fundamentals but did not complete the course. This warrants further research.

A limitation that was uncovered in the literature review but not represented in the survey was the issue of cost for distance learning. Respondents mentioned that cost was a barrier to attending non-distance learning education, however no question was asked about whether participants would be likely to pay for access to online M&E lessons. While MEASURE Evaluation is not likely to charge for online

courses, they do cost considerable resources to develop and maintain, so examining costs may warrant future examination.

RECOMMENDATIONS

While some challenges exist with online learning, overall it presents an exciting alternative to often logistically complex and expensive in-person training options for public health professionals around the world. As almost half of the respondents to this survey reported working with Maternal and Child Health, HIV/AIDS and Reproductive Health and Family Planning populations, MEASURE Evaluation's future impact on increasing M&E capacity for professionals in these fields can be tremendous as the online learning options increase. Based on the survey results, the following recommendations should be considered as MEASURE Evaluation develops future online training courses for M&E professionals.

(1) Develop courses for varied levels of expertise and consider developing certificates for completing a series of related courses.

Participants of online courses have varied levels of background education and English proficiency and therefore have different learning needs. It is important to make courses rigorous enough to provide new information to those who need advanced training and updates on best practices, but it is equally important to provide training basic enough for those who have no former knowledge of M&E. Based on the survey results, one way to approach this is to develop separate courses for a variety of M&E experience levels, which can build on each other. The Global Health e-Learning Center has implemented a certificate process whereby students can gain a certificate by successfully completing all of the courses in a

specific topic area. They provide various levels of courses, which build on each other to deepen the students understanding of course materials. This may be an example for MEASURE Evaluation's future online courses to model. Certificates for completing a series of courses on a specific subject matter can help online students gain deeper understanding in specific subjects in a stepwise approach. Many survey participants requested additional courses with more advanced M&E techniques and even requested courses on more advanced data analysis and how to use statistical software. Respondents also suggested that certificates are important for their professional advancement, so certificates should be administered for course or series completion. Though it was not addressed in this survey, course offerings should be available in a variety of languages whenever possible to increase access.

(2) Online course content recommendations: Updates, printable materials and expanded use of case studies and practical examples

Online course information must remain up to date and provide information on current best practices. For this to happen, online courses must be refreshed and updated on a regular basis. Self paced modules, quizzes, and final exams at the ends of various learning modules are very useful and well liked by students. Additionally, respondents expressed the need to be able to stop and save their course at any time and return when they are able to, especially if they lose internet connectivity. Respondents also indicated that course slides, lecture notes and other reference materials should be printable and that access to tools, M&E guides and M&E information for future reference is also very important. Finally, many of the

survey respondents requested increased use of currently relevant case studies, practical examples and exercises.

(3) Instructor and Student Feedback: E-mails, communities of practice, blended learning, online meetings

Along with the request for additional case studies, practical examples and exercises in future online courses from MEASURE Evaluation, there was a request for feedback from instructors and other students. Survey results showed that the second most important aspect of continuing education (after course content) was instructors' experience. The third most important was interaction with an instructor, and the fourth was interaction with other students. Distance learning has the unique problem of potentially being alienating and leaving students feeling that they have no one to ask questions to if they have no direct contact with instructors or other students. Many survey participants voiced the need for feedback from experts or instructors when completing online courses. In the case of online workshops, this could be done through web based live forums using audio or video conferencing or scheduled online meetings. In the case of more static online web courses, some considerations would be to include e-coaching by providing an e-mail address for students to contact instructors for immediate e-mail correspondence. Online communities of practice for students and instructors to post questions and answers for everyone to see may be another approach. This would provide students with the unique opportunity to see the questions that other students have asked and learn though others interactions with instructors as well as through their own interactions. Lack of instant feedback through online courses is an important challenge to consider since feedback from an expert or even a fellow student can have a large

impact on how well students learn information. Blended learning strategies that mix online static learning with more interactive face-to-face or virtual meetings may also provide interesting opportunities for future online M&E learning communities.

CONCLUSION

MEASURE Evaluation is well positioned to increase capacity in M&E through distance learning because of its vast experience in developing M&E training materials and implementing short and long-term M&E training programs using traditional methods. As budgets shrink, traditional methods of training alone are not able to fill the gap between need for continuing education and access to training for M&E professionals around the world. Online and distance learning is a proven strategy for increasing knowledge and improving performance in developed contexts. With additional attention to providing training in various languages and with country specific examples that are adaptable to a variety of country and cultural contexts, e-learning for M&E will play a crucial part in filling this gap. Addressing the barriers discussed in this paper and providing solutions to concerns expressed by survey participants will be important as MEASURE Evaluation moves forward with developing additional M&E online courses.

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APPENDIX A

Survey on MEASURE Evaluation's Online Learning for M&E

Q1 Informed consent: You have been asked to participate in this 10 - 12 minute long online survey because of your completion of the online MENTOR course "M&E Fundamentals" provided for FREE online by MEASURE Evaluation. This survey will inform future online course development in Monitoring and Evaluation (M&E) by MEASURE and will help to determine the best ways to provide distance learning to professionals globally. Data collected in this study will have no identifying information and all results will be reported in aggregate. In order to take this survey you must confirm that you are at least 18 years old. There are no known risks to you for taking this survey and you participation is entirely voluntary. However, your participation will help to improve online M&E learning. Please indicate your consent by selecting one of the following:

- ❍ I agree to participate in this study (1)
- ❍ I do not agree to participate in this study (2)

If I do not agree to participa... Is Selected, Then Skip To You have decided to not participate i...

Answer If Informed consent: You have been asked to participate in t... I <u>do not agree</u> to participate in this study Is Selected

Q1a You have decided to not participate in this survey. Thank you for your consideration. Please confirm that you do not want to participate below or return to the survey. Please confirm that you do not want to participate in this 10 minute online survey about distance learning and M&E training.

- ❍ I do not want to participate in this survey. (1)
- ❍ Return to survey consent. (2)

If I do not want to participat... Is Selected, Then Skip To End of Survey

Answer If You have decided to not participate in this survey. Than... I clicked on the wrong button - I actually do want to participate in this survey. Is Selected

Q1b Informed consent: You have been asked to participate in this online survey because of your completion of the online MENTOR course "M&E Fundamentals". This survey will inform future online course development in Monitoring and Evaluation (M&E) and will help to determine the best ways to provide distance learning to professionals globally. Data collected in this study will have no identifying information and all results will be reported in aggregate. In order to take this survey you must confirm that you are at least 18 years of age. There are no known risks to you for taking this survey. You participation is entirely voluntary. Your participation will help to improve M&E online learning. Please indicate your consent by selecting one of the following:

- ❍ I agree to participate in this study (1)
- ❍ I do not agree to participate in this study (2)

If I do not agree to participa... Is Selected, Then Skip To End of Survey

Q2 What is your age?
- ❍ younger than 18 (1)
- ❍ 18 - 24 (2)
- ❍ 25 - 34 (3)
- ❍ 35 - 44 (4)
- ❍ 45 - 54 (5)
- ❍ 55 - 64 (6)
- ❍ 65 or older (7)

Answer If What is your age? younger than 18 Is Selected

Q3 You have indicated that you are younger than 18 years old. Unfortunately you are not eligible to take part in this survey. Thank you for your time.

If You have indicated that you... Is Displayed, Then Skip To End of Survey

Q4 Country of origin (select only one)
- ❍ (202 options)

Q5 Country(s) of citizenship(To select more than one country, hold down the 'control' (ctrl) button on your key board while you select all of the appropriate countries.)
- ❑ (202 options)

Q6 Current primary country of residence (select only one)
- ❍ (202options)

Q7 Are you ...
- ❍ Male (1)
- ❍ Female (2)

Q8 Which of the following choices bests describes your current employment status?
- ❍ Not currently employed (1)
- ❍ Student (full time) (2)
- ❍ Primarily a student but also working part time (3)
- ❍ Working (full time) (4)
- ❍ Primarily working but also taking classes part time (5)

Q9 Please indicate your highest level of completed education
- ❍ Less than high-school (1)
- ❍ High-school degree (2)
- ❍ Undergraduate degree (3)
- ❍ Some graduate school (4)
- ❍ Masters degree (5)
- ❍ Doctorate degree (6)

Q10 In which country did you complete your highest level of education? (select only one)
- ❍ (202options)

Q11 Do you use a computer with internet access in the following settings?(It does not matter if it is a laptop or desktop computer)

	Yes (1)	No (2)
Home (1)	❍	❍
Work (2)	❍	❍
School (3)	❍	❍
Internet cafe (4)	❍	❍
Library (5)	❍	❍
Mobile device with internet (6)	❍	❍
Other - please specify: (7)	❍	❍

Q12 Where do you access a computer with internet most often? Please tell us what percentage of the time you access a computer in the following places:

_____ Home (1)
_____ Work (2)
_____ School (3)
_____ Internet cafe (4)
_____ Library (5)
_____ Mobile device with internet (6)
_____ Other - please specify: (7)

Q13 In a normal month, how often do you use a computer?

- ❍ Daily (1)
- ❍ 4-6 times per week (2)
- ❍ 2-3 times per week (3)
- ❍ Once per week (4)
- ❍ 2-3 times per month (5)
- ❍ Once per month (6)
- ❍ Less than once per month (7)
- ❍ Almost never (8)

Q14 When you use the computer, how much time do you usually spend at the computer per day?

- ❍ Less than an hour (1)
- ❍ More than an hour, but less than 4 hours (2)
- ❍ More than 4 hours, but less than 8 hours (3)
- ❍ 8 hours or more (4)

Q15 What is the internet connection you use most often? Remember, this question is not asking if you have a wired or wireless connection. It is asking how the internet connection is transmitted to the home/office/school etc. for the computer you use most often.

- ❍ Dial-up including ISDN (Integrated Services Digital Network) - this is usually a slow connection which functions over a telephone line (1)
- ❍ Cable - this allows you to receive Internet access through local television cable network (2)
- ❍ DSL (Digital Subscriber Line) - this allows high-bandwidth internet connection over telephone lines (3)
- ❍ Satellite - this allows you to receive internet connection through a satellite dish (4)
- ❍ Cell Phone / Mobile Phone - allows you to access the internet through a cell phone / mobile phone connection (5)
- ❍ Fiber optic - this allows internet connection as light impulses through high-tech glass or plastic wires or fibers (6)
- ❍ Don't know (7)
- ❍ Other - please specify: (8) _____

Q16 What is your internet connection speed? If you do not know your download and upload speeds, you can test your internet speed by visiting the speed test website: 1) open a new internet window 2) go to this website: http://www.speedtest.net 3) click on "BEGIN TEST" This website will tell you your download speed and your upload speed.

	Less than 1 Mb/s (1)	01.01 - 05.00 Mb/s (2)	05.01 - 10.00 Mb/s (3)	10.01 - 20.00 Mb/s (4)	20.01 Mb/s or more (5)	The site did not work (6)	I do not know (7)
Internet Download Connection Speed (1)	❍	❍	❍	❍	❍	❍	❍
Internet Upload Connection Speed (2)	❍	❍	❍	❍	❍	❍	❍

Q17 On average, how often does your internet connection time out during one day ?

- ❍ Never (1)
- ❍ Less than once per day (2)
- ❍ Once per day (3)
- ❍ 2-3 times per day (4)
- ❍ 1 time per hour (5)
- ❍ 2-3 times per hour (6)
- ❍ 4 or more times per hour (7)

Q18 How satisfied are you with your internet connection / speed? Drag bar below to indicate your level of satisfaction: 0 (far left) being very dissatisfied and 10 (far right) being very satisfied

- ❍ 0 (0)
- ❍ 1 (1)
- ❍ 2 (2)
- ❍ 3 (3)
- ❍ 4 (4)
- ❍ 5 (5)
- ❍ 6 (6)
- ❍ 7 (7)
- ❍ 8 (8)
- ❍ 9 (9)
- ❍ 10 (10)

Q19 Browser Meta Info

Browser (1)
Version (2)
Operating System (3)
Screen Resolution (4)
Flash Version (5)
Java Support (6)
User Agent (7)

Q20 Do you have the ability to listen to audio on the computer you use most often?

- ❍ Yes (1)
- ❍ No (2)

Q21 Do you have the ability to watch video on the computer you use most often?

- ❍ Yes (1)
- ❍ No (2)

Q22 Do you have the ability to view Flash media on the computer you use most often?

- ❍ Yes (1)
- ❍ No (2)

Q23 How often are you away from your computer for more than 4 days in a row?This can include any reason that you might not be able to use your computer including but not limited to travel, extended power outages, computer maintenance, etc.

- ❍ Never (1)
- ❍ Less than once per year (2)
- ❍ 2-4 times per year (3)
- ❍ 5-11 times per year (4)
- ❍ Once per month (5)
- ❍ 2-3 times per month (6)
- ❍ Once per week (7)

Q24 When you travel, do you usually bring a computer with you?

- ❍ Yes (1)
- ❍ No (2)

Q25 Since receiving your highest degree, have you considered returning to school for a degree higher than the one you currently hold?

- ❍ Yes, I am currently enrolled (1)
- ❍ Yes, I plan to enroll in the next 1-5 years (2)
- ❍ No, I have reached the highest degree (terminal degree) in my field (3)
- ❍ No, I am not interested in a degree higher than the one I currently hold (4)
- ❍ I would like to, but it is not feasible because of costs (5)
- ❍ I would like to, but it is not feasible because of distance to schools (6)
- ❍ I would like to, but it is not feasible because of family reasons (7)
- ❍ I would like to, but my job/work/employer is not supportive (8)
- ❍ I would like to, but it is not feasible for another reason Please specify: (9) _____

Q26 What reasons would encourage you to enroll in a higher degree program?(Please select your top 3 reasons)

- ❑ To find a new job (1)
- ❑ To increase chances for a promotion (2)
- ❑ To increase income (3)
- ❑ To improve professional competence (4)
- ❑ To change careers (5)
- ❑ To expand knowledge and skills (6)
- ❑ If my employer suggested it (7)
- ❑ If I could receive a scholarship (8)
- ❑ Dissatisfaction with previous professional practice (9)
- ❑ Other - please specify: (10) _____

Q27 If an online degree program were available to you, would you consider getting your next degree through an online program?

- ❍ Yes I would be very likely to apply (1)
- ❍ YesI would be somewhat likely to apply (2)
- ❍ No I would not be likely to apply (3)
- ❍ No I would definitely not apply (4)

Q28 If continuing education credits or professional workshops in Monitoring and Evaluation (M&E) (not a degree program) were available to you online, would you consider taking such courses through an online program?

- ❍ Yes I would be very likely to (1)
- ❍ Yes I would be somewhat likely to (2)
- ❍ No I would not be likely to (3)
- ❍ No I would definitely not (4)

Q29 What reasons would encourage you to take online Monitoring and Evaluation (M&E) courses (not a degree program) (Please select your top 3 reasons)

- ❑ To find a new job (1)
- ❑ To increase chances of promotion (2)
- ❑ To increase income (3)
- ❑ To improve professional competence (4)
- ❑ To change careers (5)
- ❑ To expand knowledge and skills (6)
- ❑ If my employer suggested it (7)
- ❑ If I could receive a scholarship (8)
- ❑ Dissatisfaction with previous professional practice (9)
- ❑ Other - please specify: (10) _____

Q30 Would you participate in short courses or workshop trainings in Monitoring and Evaluation (M&E) in the future if they were available online?

- ❍ Yes (1)
- ❍ No (2)

Q31 Since receiving your highest degree, have you taken any continuing education/ professional development courses or workshops in person/ in a classroom?

- ❍ Yes - If yes, what type of courses? - Please list: (1) _____
- ❍ No (2)

Answer If Since receiving your highest degree, have you taken any c... Yes - If yes, what type of courses? - Please list: Is Selected

Q32 Were any of these in person/ in classroom courses (or workshops) related to M&E (monitoring and evaluation)?

- ❍ Yes - If yes, please list the courses: (1) _____
- ❍ No (2)
- ❍ Not Applicable (3)

Q33 Since receiving your highest degree, have you taken any continuing education/ professional development courses or workshops other than the MENTOR "M&E Fundamentals" course online (in an entirely online format) ?

- ❍ Yes - If yes, what type of courses? - Please list: (1) _____
- ❍ No (2)

Answer If Since receiving your highest degree, have you taken any c... Yes - If yes, what type of courses? - Please list: Is Selected

Q34 Were any of these online courses or workshops other than the MENTOR "M&E Fundamentals" related to M&E (Monitoring and Evaluation)

- ❍ No (1)
- ❍ Yes - If yes, please list the courses: (2) _____
- ❍ Not Applicable (3)

Q35 What has been your general level of satisfaction with online learning?

- ❍ Very Satisfied (1)
- ❍ Satisfied (2)
- ❍ Neutral (3)
- ❍ Dissatisfied (4)
- ❍ Very Dissatisfied (5)

Q36 What comments or suggestions do you have for improving the quality of online learning on MENTOR in the future?

Q37 What components of learning are most important to you when you take a continuing education course or workshop?Please rank the following in order of most important (1) and least important (6):

_____ Course content (1)
_____ Instructor's experience (2)
_____ Interaction with an instructor (3)
_____ Interaction with fellow students (4)
_____ Entertainment / presentation quality (5)
_____ Technical support (6)
_____ Other - please specify: (7)

Q38 Please tell us how important being able to do the following things are when you are learning:

	Very important (1)	Somewhat important (2)	Neutral (3)	Somewhat unimportant (4)	Very unimportant (5)
See the instructor (picture) (1)	❍	❍	❍	❍	❍
See the instructor (video) (2)	❍	❍	❍	❍	❍
Hear the instructor (3)	❍	❍	❍	❍	❍
Read what the instructor is saying (when lecture is in an audio format) (4)	❍	❍	❍	❍	❍
See lecture slides (5)	❍	❍	❍	❍	❍
Print lecture slides (6)	❍	❍	❍	❍	❍
Print the module with all lecture notes (7)	❍	❍	❍	❍	❍
Ask questions in real time (8)	❍	❍	❍	❍	❍
Communicate online with other students (9)	❍	❍	❍	❍	❍
View videos related to materials (10)	❍	❍	❍	❍	❍
Move at my own pace (as slowly or quickly as I want to) (11)	❍	❍	❍	❍	❍
Other (12)	❍	❍	❍	❍	❍

Q39 Are there any other things that were not mentioned above that are important to you when doing online learning?

Q40 Have you had any experience with the following online meeting platforms?

	No, never heard of (1)	Heard of, but never used (2)	Yes, I have used this (3)
"Elluminate Live!" (1)	❍	❍	❍
"GoToMeeting" (2)	❍	❍	❍
"Adobe Acrobat Connect" (3)	❍	❍	❍
"Microsoft Office Live Meeting" (4)	❍	❍	❍
"Skype" (5)	❍	❍	❍
Other - please specify: (6)	❍	❍	❍
Other - please specify: (7)	❍	❍	❍

Q41 If you have used any of the above online meeting platforms, please indicate your level of satisfaction with each.

	Very Satisfied (1)	Satisfied (2)	Neutral (3)	Dissatisfied (4)	Very Dissatisfied (5)	Not Applicable (6)
"Elluminate Live!" (1)	❍	❍	❍	❍	❍	❍
"GoToMeeting" (2)	❍	❍	❍	❍	❍	❍
"Adobe Acrobat Connect" (3)	❍	❍	❍	❍	❍	❍
"Microsoft Office Live Meeting" (4)	❍	❍	❍	❍	❍	❍
"Skype" (5)	❍	❍	❍	❍	❍	❍
Other - please specify: (6)	❍	❍	❍	❍	❍	❍
Other - please specify: (7)	❍	❍	❍	❍	❍	❍

Q42 Have you had any experience with M-Learning, also known as Mobile Learning?M-Learning refers learning using mobile devices like hand held computers, mobile phones, MP3 players etc.

- ❍ No, never heard of it (1)
- ❍ Heard of it, but have never used it (2)
- ❍ Yes, I have used it (3)

Answer If Have you had any experience with Mobile Learning? Yes, I have used it Is Selected

Q43 Please tell us how you have used Mobile Learning:

Answer If Have you had any experience with Mobile Learning? Yes, I have used it Is Selected

Q44 In your opinion, was Mobile Learning an effective method for learning?

- ❍ Yes (1)
- ❍ No (2)

Q45 Have you had any experience with virtual worlds in learning?Virtual worlds in learning is a strategy that uses concepts of virtual gaming to teach information to students in an interactive format which would otherwise be difficult to recreate due to cost, scheduling or location.

- ❍ No, never heard of it (1)
- ❍ Heard of it, but have never used it (2)
- ❍ Yes, I have used it (3)

Answer If Have you had any experience with virtual worlds in learning? Yes, I have used it Is Selected

Q46 Please tell us how you have used virtual worlds in learning:

Answer If Have you had any experience with virtual worlds in learning? Yes, I have used it Is Selected

Q47 In your opinion, was virtual worlds in learning an effective method for learning?

- ❍ Yes (1)
- ❍ No (2)

Q48 What type of organization do you currently work for (did you most recently work for)?

- ❍ National Government (1)
- ❍ Regional Government (2)
- ❍ Local Government (3)
- ❍ USAID (4)
- ❍ USAID cooperating agency (5)
- ❍ CDC (6)
- ❍ US Department of Defense (7)
- ❍ Other US Government (8)
- ❍ UN Oganizations (9)
- ❍ International NGO (10)
- ❍ Local NGO (11)
- ❍ Research / Policy Institution (12)
- ❍ Academic Insitution (13)
- ❍ None of the above - please specify: (14) _____

Q49 Which area of health or specific populations are most relevant to the work you do now? (select all that apply)

- ❑ Family Planning / Reproductive Health (1)
- ❑ Maternal and Child Health (2)
- ❑ HIV/ AIDS (3)
- ❑ Malaria (4)
- ❑ Tuberculosis (5)
- ❑ Avian influenza (6)
- ❑ Other infectious diseases (7)
- ❑ Chronic diseases (8)
- ❑ Nutrition (9)
- ❑ Water / Sanitation (10)
- ❑ Other - please specify: (11) _____

Q50 What is your current position?

- ❑ Not Currently Employed (1)
- ❑ Student (2)
- ❑ Intern / Volunteer (3)
- ❑ General Staff (4)
- ❑ M&E Staff (5)
- ❑ M&E Officer (6)
- ❑ M&E Specialist (7)
- ❑ Head of a department of a ministry (8)
- ❑ Head department for an institution / organization (9)
- ❑ Head of an Institution / organization (10)
- ❑ Other - please specify: (11) _____

APPENDIX B

Respondent's comments on improving MEASURE Evaluation's online learning:

What comments or suggestions do you have for improving the quality of online learning on MENTOR in the future?

- Include a learning module to learn about a statistical package like Epi-Info.
- More updates are needed; Advanced level should be added for upgrading new knowledge and skills.
- Include case application and offer advanced courses.
- Case studies should be used to illustrate some points.
- [Add] more interaction with students.
- [Add] variety in courses provided.
- [Add] option for questions to be asked or clarified by email.
- Give assignment to participants to perform outside of the course and report on it. Make it compulsory as the way to move forward with the course to measure their commitment and progress.
- Give more case study examples.
- I would like to learn specialized on MENTOR in the future.
- It was too short.
- Not only focus on Health issues around but to strategize on public policy and administration.
- It's better to provide the certificate which is better in printing quality especially signature.
- NON
- Online course are good one can do by doing their job, One thing is fee structure should be minimal and it should be applicable to his/ her profession.
- These should be interactive and more comprehensive.
- I suggest the program can better be enhanced by allowing high profile universities award certificate for the program. I mean the awarding institution should find its name on the certificate or diploma that may be awarded at the completion of course.
- After completion of course send [a] signed and stamped hard copy of certification and also certified the organization itself with university or education board.
- Include practical examples from different projects (not only on health) and include advanced statistical analysis.
- Courses must not be general but preferably context based to help improve learning.
- Noting in particular.
- Issue [a] recommendation certificate, which would be recognized by the employer.
- Include Q&A forums, flash modules, widen the content, interaction with fellow students.
- My speed connection is rather slow. No comments on the quality of online learning materials.
- No comment as of now.
- Should think of coming up with a good certificate - not one with a URL as a footnote.
- The material should be accessible throughout 24 hours. There should be scope for putting questions to mentor for clarifications.

- I would request more professional courses be hosted by MENTOR.
- [Courses] need to have affiliated institutions that trainees can be referred to for practicum.
- I am ok with the way it is now.
- Develop advanced courses so that someone can upgrade time after time.
- Introduce aspects of knowledge management in order to make use of M&E information for program improvement and organizational learning.
- Broaden the scope of the course.
- [Monitor] how many times a person goes online to make sure that a person doesn't take like forever to finish a course. Again for the certificate would be glad if there is serial numbers this is because in our country its very essential.
- Increase learners' interactions with each other.
- No comment for now.
- Improve the learning materials and certificates.
- I mentioned in detail when the course ended.
- None.
- It should be interactive and foster some level of discussions among the learners to exchange experiences and best practices.
- Provide a variety of online courses to meet the demands of people like me.
- Add more courses related to data management and data analysis.
- Include LIF online assistant.
- There should be more courses and if possible, a higher degree course.
- I am very satisfied with the MENTOR online course. I suggest more detailed reference materials to be presented.
- Original certificates of completion to be send by post. This makes the certificates more authentic.
- MENTOR course period should be longer. Instead of 4- 5 days its should be like 3 months or 6 months.
- Expand course options.
- Do not make it too basic, or provide more advanced levels.
- It provides a chance for individual improving their knowledge through application while they are doing their responsibility, in addition to that it encourages people even they cannot afford training or further education related expenses.
- Keep up the good course content.
- Combine media, audio visual, etc.
- There should provide more of these online courses.
- Need the advanced courses on-line too or a more challenging course than the basic.
- It would be more beneficial if it has detailed information about Monitoring and Evaluation
- Introduce more M&E courses and provide certificate courses that are certified by internationally recognized professional bodies.
- Add more competency courses.
- Certificates should be provided to the people who do your tests or examinations.
- It has to be more detailed in content and also the exercises should be wide and deep.

- Nil.
- The program should incorporate some statistical packages as part of measuring the efficiency in programming.
- It should be upgraded into a degree programme.
- Its one of the best I have found. The pages open faster.
- The training content needs to be expanded further to get deeper into M&E.
- I would like to see a quick response whenever i ask questions
- I would like to suggest that MENTOR should introduce the practical part in future online courses.
- Have a virtual classroom.
- Include practical applications for use in our programs, like a database that we could adapt and use in our workplace for monitoring our projects.
- More trainings.
- I would be happy if continuation of other level of training [were] available.
- 1. Follow-up on members trained to assess the impact of the course. 2. Offer advanced courses for those who qualified for the one in M&E Fundamentals. 3. Offer online courses on statistical analysis tools such as SPSS. STATA and EpiInfo since they come in handy in M&E.
- Putting more details and examples on the particular issue.
- Keep the good work on.
- Increase more content and practical examples or case studies as part of course content.
- Add more content on the course.
- Have a diploma or other M&E related courses.
- It is a good thing as it help a number of people who are unable to be full time in class.
- Introduction of many more courses such as project management, data quality assurance, database design, research methods etc will be helpful.
- Use black boards for teaching and provision of assignments and discussion for a.
- N/A
- Back it with Audio.
- It should contain more case studies.
- Include more content in data processing.
- More practical exercises or concrete study cases.
- So far the training is good according to me.
- [Make it] easily accessible and [improve] user friendliness.
- Maybe [it would be beneficial] if we attend a classroom online course with discussion worldwide or webinar.
- I really enjoyed the course. I will like MENTOR to not restrict it to 'Fundamentals', there should be a continuation like the advanced M&E.
- They should keep it up.
- Try to add more content and give assignments to students to gauge their competence.
- Some topics are just harder to learn without somebody explaining it directly as written explanations can be more confusing sometimes. This is not really a suggestion; maybe for longer courses it would be good to have an e-Coach who is available to chat at certain hours.

- The course is well spelt out and allows adequate time to complete; it was ok for me.
- More related courses need to be added.
- I was unable to download my certificate of completion form. How do I get it for proof of completion of the MENTOR online course?
- Have discussion forums for those undertaking the online courses.
- If the courses could be more diversified, they would attract a wider audience.
- Give explanations of acronyms and abbreviations, use easy language.
- make it more interactive.
- Open to all and free of charge for NGO development staff with online membership system and virtual learning corner.
- More details and enriched materials.
- Broaden the scope taught and maybe progressively award participants till may be diploma levels in M&E.