ITU Asia-Pacific Centre of Excellence

Training Course on
Measuring ICT Access and Use by Households and Individuals

Organised jointly by ITU and LIRNE*asia*

Hosted by MICT Thailand
TOT Academy

Bangkok, Thailand

19-23 October 2009

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ITU Training Course on Measuring ICT Access and Use by Households and Individuals

Final Report

1. General aspects

The **ITU Training Course on Measuring ICT Access and Use by Households and Individuals** was held in Bangkok, Thailand, from 19-23 October 2009. The main objective of the course was to improve the capacity of national statistical offices from Asia-Pacific countries to produce internationally comparable statistics on ICT access and use by households and individuals.

The course was divided into the following five modules (see agenda in Annex 2):
- Module H-1: Introduction to household ICT statistics. Survey planning and preparatory work
- Module H-2: Statistical standards and topics. Data sources and collection techniques
- Module H-3: Questionnaire design. Household Survey design
- Module H-4: Data processing. Data quality and evaluation
- Module H-5: Data Dissemination

2. Participation

There were 54 applications received from national statistics offices of 24 countries of the Asia-Pacific region. Since, the course is designed to be delivered to a maximum of 25 participants, a number of criteria were used to select the candidates. These included candidates' background in statistics or economics, their role in conducting household surveys in their country (including all phases of survey implementation) and excellent level of English (as the training was conducted in English).

The course was attended by 26 participants from National Statistical Offices of the following 18 countries of the Asia-Pacific region: Afghanistan, Bangladesh, Cambodia, China, Fiji, Indonesia, Korea (Rep. of), Malaysia, Micronesia, Mongolia, Nepal, Pakistan, Philippines, Singapore, Sri Lanka, Thailand, Tonga and Viet Nam (see list of participants in Annex). In addition, staff members of LIRNE*asia,* MICT Thailand*,* and UNESCAP Statistics Division attended.

3. Course delivery

The main instructor that delivered the course was Mr. José Cervera, consultant to the ITU. ITU staff delivered several parts of the course, in particular related to the definitions of the core list of ICT household indicators and the ITU data collection and dissemination of ICT household statistics. The course is designed to be highly interactive and included group discussions, group exercises, as well as tests and evaluations for each of the five modules, all of which was managed and facilitated by ITU.

4. Overview of the training course outcome

Overall, the course was appreciated by the participants. The majority of participants evaluated its content, the support materials provided and the methodology as "good" (second highest level possible) while the organization of the training as "very good". English language is one of the barriers faced by the participants that attended the course. Participants appreciated very much the interactive nature of the training course and their involvement in group discussions. Also, the daily completion of tests was considered positively. The tests were graded every day to provide results and review difficult concepts the next morning, which allowed providing immediate feedback.

Since this is the first training of its kind delivered in the region[1], the participants highly appreciated the possibility to learn about harmonizing ICT statistics and exchanging country experiences. A number of countries in the region have started to include ICT access indicators in their ongoing surveys or censuses; others are planning to include them in their forthcoming surveys; and a few are envisaging carrying out an ICT survey.

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[1] A training course on measuring ICT use in businesses was delivered to participants from the Asia-Pacific region in February 2008, organized by UNCTAD in collaboration with APCICT and UNSIAP in Incheon, Republic of Korea. For more information, see http://new.unctad.org/templates/Event____887.aspx

Therefore this training course has contributed to foster their work in this regard, for which they expect ITU and the *Partnership* to follow up.

The selected participants met the expectations of the organisers and the trainer; they had a good statistical knowledge and were familiar with the different steps of conducting surveys, in particular household surveys. As a preparation for the course, the participants were asked to provide a country paper highlighting the different household surveys conducted in their country and the methodology employed in each survey. Therefore, they were able to follow the training content and participate actively in all sessions. Trainer and facilitators of the training course observed a strong commitment from the participants to get the most benefit from the course in view of measuring ICT statistics in the future.

5. Evaluation of the course by participants

This section provides the results of the evaluation of the course carried out by the participants. Results are shown separately for the final overall evaluation of the course, and for each module.

5.1. General evaluation of the course

Issues considered in the final evaluation were the content of the course in view of the coverage of the topic, the depth of the technical level and the accuracy of the information delivered. It also assessed the quality of the support material, the methodology, the organisation, the duration and the number of participants of the training course. Participants were also asked to make general suggestions for improving the course. Detailed answers are provided in Annex 1. The scale used for this evaluation ranges from "very good" to "very poor".

5.1.1 Content evaluation:

The content of the course was evaluated in terms of three components. The first was the coverage of the topic, which was evaluated as "good" by the majority of the participants (58%), as "very good" by 31% and "adequate" by 11%. The technical level was assessed as "very good" by 32%, and assessed as "good" by 44% and "adequate" by the remaining 24%. The participants commented that technical issues such as sampling design and sampling error, which are usually the more complex technical issues in the survey process, should be treated in a greater detail during a much longer time schedule. "Accuracy" was rated as "very good" (46%), "good" (46%) and "adequate" by the rest (8%) of the participants.

5.1.2 Support material:

This includes the ITU Manual for Measuring ICT Access and Use by Households and Individuals and the presentation slides used to deliver the five modules. Overall, the participants rated the materials as "good" (53%) and "very good" (39%). Half of the participants evaluated the Manual as "very good" (50%) and 46% as "good". Regarding the slides, 28% evaluated them as "very good" and 60% as "good". Majority of the comments received were pertaining to the presentation slides, and included suggestions to include examples to better illustrate the messages included in the slide, or to increase the font to help reading easier. As tests are part of the modules, they also commented on the phrasing of the test questions, which they found difficult in certain cases. Specifically, the use of words "may" and "probably" was found to be confusing. There are also questions that need to be rephrased, because of its double-barrelled meaning which are not easy for non-native English speakers.

5.1.3 Methodology:

Participants evaluated the methodology as "very good" (42%) and "good" (46%). They praised especially the usefulness of sharing country experiences, group discussions, exercises and tests, which are an integral part of each of the course modules. However, they expressed interest in having more practical exercises and more examples to better illustrate the subjects being discussed.

5.1.4 Organisation:

The organisation of the course was highly appreciated in general. 56% rated it as "very good" and 38% as "good". Participants particularly acknowledged the excellent training venue and logistics provided by TOT Academy, supportive staff of MICT Thailand and TOT Academy, and well-organized training delivery and facilitation of the instructors and ITU.

5.1.5 Duration:

62% of the participants considered the duration of the training course adequate (long enough), while 38% found it too short. Nobody considered the course as too long. Those that considered it too short suggested that the training should be delivered for at least 7 days (some suggested delivering the training for two weeks) with shorter day programme. This will allow them to better understand the technical topics discussed, and suggested to dedicate the afternoon session for more practical exercises and country experiences/examples.

5.1.6 Number of participants:

The number of participants was assessed as "adequate" (92%), while a few of them said it was too low (8%). In general, participants commented that the size was good enough to allow individual participation and sharing of country experiences. A number of suggestions were made by the participants, including the importance of having more

countries represented in the course, rather than having two participants per country. As noted earlier, there were 24 countries that applied but certain candidates did the meet the required criteria. Therefore, in some cases, two qualified candidates from the same country were accepted. At the same time, it was mentioned that in the future, it should be ensured that participants have a good level of English to follow the course and participate in the discussions.

5.1.7 General suggestions:

The participants made some general suggestions for change and improvement of the course. The most common suggestion was to increase the duration of the course (but to shorten the daily schedule) in order for the participants to better absorb the information and to apply them directly to practical exercises. They particularly suggested increasing the duration of modules with technical content such as modules 2, 3 and 4. They also suggested adding a topic on analysis of survey results, as part of the data dissemination module (module 5). A number of participants requested to have examples while presenting the slides, and to include visual examples for technology-related terminologies. They also mentioned the importance of having a refresher course in a few years time to see how countries applied the knowledge acquired in the training and to share experiences of those that conducted the survey after the training. Countries also requested to bring the training to the Pacific countries where more countries with similar levels (both economic and NSO capacity) can participate and share experiences. They suggested conducting the training course in collaboration with the Secretariat of the Pacific Community (SPC).

5.2. Evaluation of the modules

Each day, an evaluation of each of the five modules was conducted. Participants were requested to evaluate the following aspects of every module:

- Comprehensibility of the presentation and presenter
- Relevance of the module to their work, now or in the near future
- Value of group exercise in reinforcing learning
- Usefulness of supporting material: Manual and presentation slides

Similar to the final overall course evaluation, the scale used range from "very good" to "very poor".

Participants were also asked which parts of the module they liked most/least, and to provide recommendations in order to improve each module.

Module 1: Introduction to household ICT statistics. Survey planning and preparatory work

Module 1 was evaluated as either "very good", "good" or "adequate" (see chart). Majority (70%) of the participants liked the survey planning part of th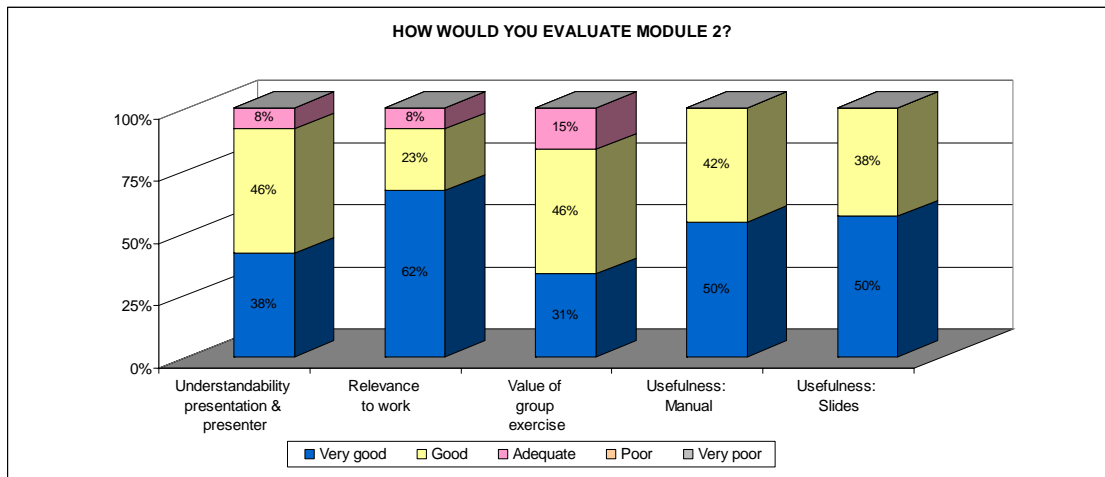e module while some liked the group exercise (13%) and the rest of the participants liked all parts of the module. Among the suggestions made by participants are: to increase the time for the module, to include some case studies or country examples while presenting the module, to increase the size of the font used in the slides, and to provide a form that can be used for group exercise.
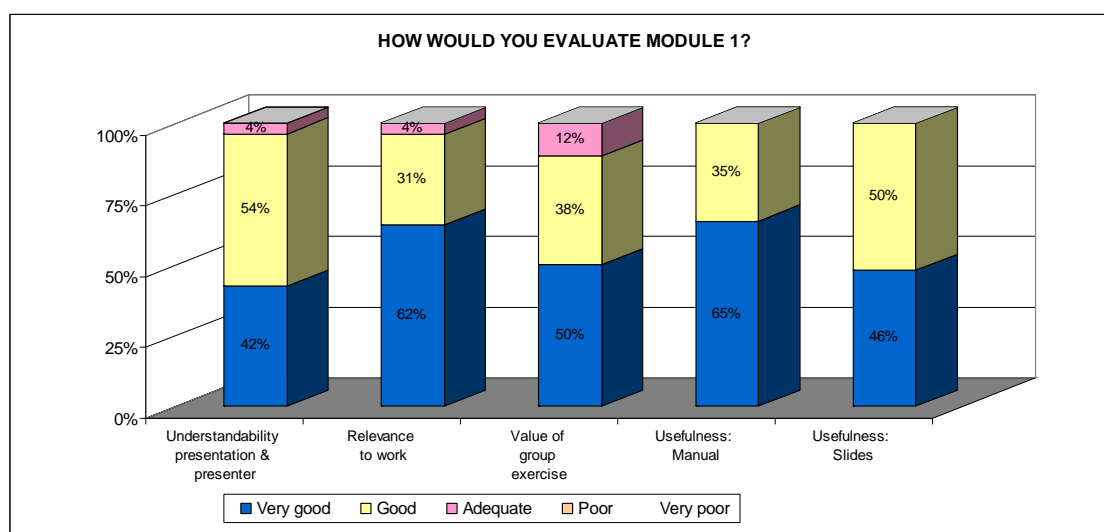
Module 2: Statistical standards and topics. Data sources and collection techniques

Module 2 was particularly relevant for the participants as they are mostly involve in the survey implementation in their respective countries. Almost half of the participants graded the module as "very good" (46%) while others said it is either "good" or "adequate". The most liked topic was the core ICT household indicators including their definitions and clarifications. Others liked the group exercises and data collection techniques. They particularly highlighted the technical skills of the instructors in delivering the concepts. Most participants suggested including examples to illustrate the different technologies included in the core ICT household indicators and their sub-categories. They also suggested clarifying the note related to the activity excluded from the Internet banking and to explain more the different types of Internet access (narrowband, broadband).

HOW WOULD YOU EVALUATE MODULE 2?

	Understandability presentation & presenter	Relevance to work	Value of group exercise	Usefulness: Manual	Usefulness: Slides
Adequate	8%	8%	15%		
Good	46%	23%	46%	42%	38%
Very good	38%	62%	31%	50%	50%

Legend: ■ Very good □ Good ■ Adequate □ Poor ■ Very poor

## Module 3: Questionnaire design. Household Survey design

Overall, module 3 was evaluated as either "very good" (48%) or "good" (45%) (See chart for details of the different aspects). Forty per cent (40%) of the participants liked all parts of the module; while forty-five per cent (45%) liked the sampling techniques and questionnaire design parts and made particular emphasis on the importance of the two topics. The participants suggested including practical country examples or exercises on sampling design (which seems to be the most difficult area and at the same time very relevant for their work) and to increase the time allotted to group discussions.

HOW WOULD YOU EVALUATE MODULE 3?

	Understandability presentation & presenter	Relevance to work	Value of group exercise	Usefulness: Manual	Usefulness: Slides
Adequate	8%		4% / 12%	8%	4%
Good	50%	42%	46%	31%	38%
Very good	35%	50%	31%	54%	50%

Legend: ■ Very good □ Good ■ Adequate □ Poor □ Very poor
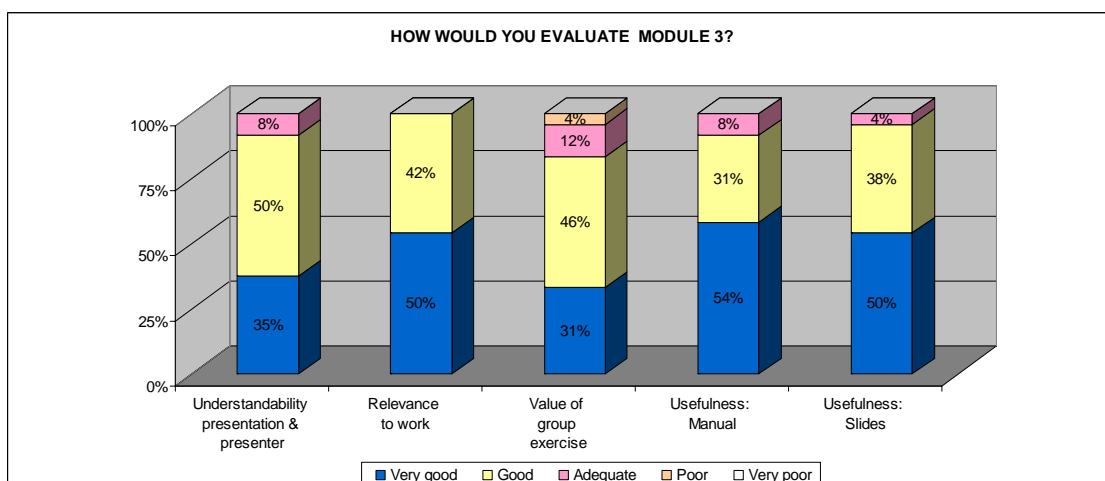
Module 4: Data processing. Data quality and evaluation

During the presentation of module 4, participants were very enthusiastic in learning how to compute the weights that will be applied to the sampled households or individuals to come up to the value of the in-scope population or the target population. For some countries, this subject was new and they highly appreciated to learn how to weight the data and compute the sampling error during the training. However, this module received
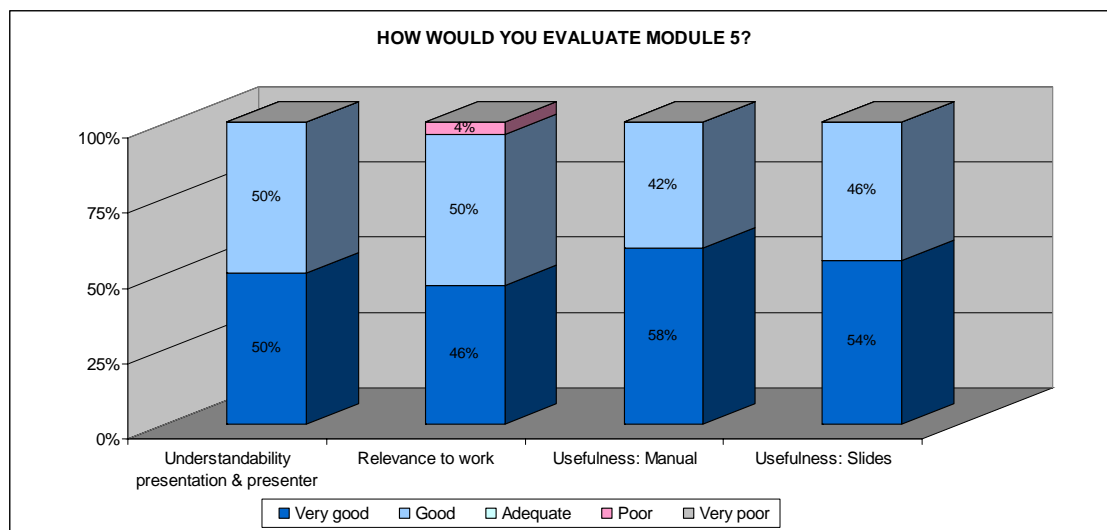
the lowest assessments in terms of understandability aspect (see chart), which may be attributed to its technical nature (both for sampling error and weights computation). Although the overall evaluation is still "very good" and "good", some participants found the module difficult to understand and graded it as "poor" (4%). The majority of the participants liked all parts of the module (37%), while 26% like the data editing part. They also liked the group exercises. For participants, the most complex parts of this module were sampling error calculation and weighting of data; therefore they recommended explaining these in more detail.
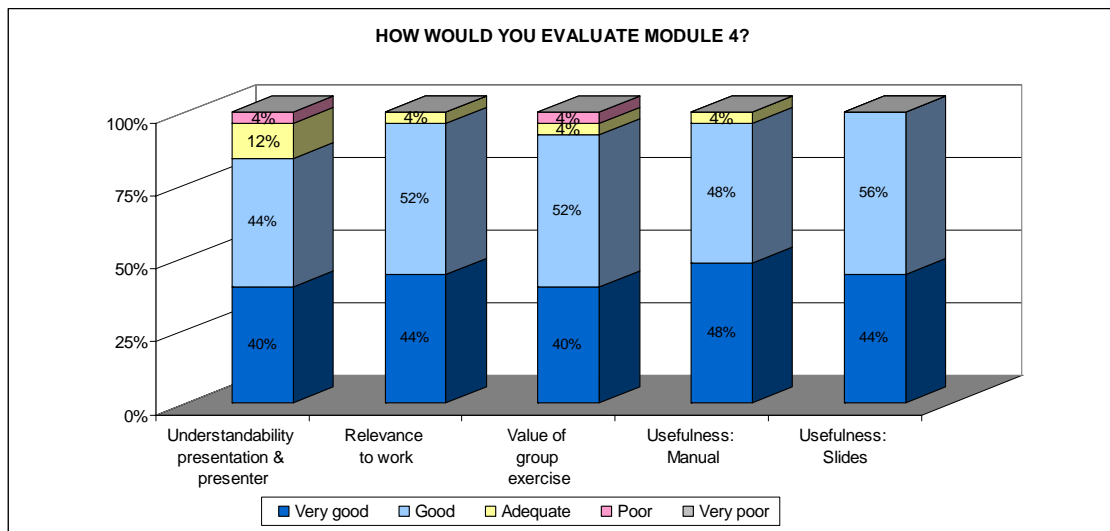
Module 5: Data Dissemination

Overall, this module was evaluated as "very good" (48%) or "good" (49%) by the participants.[2] Most participants liked all parts of the module while others particularly appreciated the metadata and country data dissemination parts of the module. Participants suggested providing examples showing how countries disseminate their survey results.

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[2] This module doesn't include a group exercise.

HOW WOULD YOU EVALUATE MODULE 5?

Category	Understandability presentation & presenter	Relevance to work	Usefulness: Manual	Usefulness: Slides
Adequate	50%	50%	42%	46%
Poor		4%		
Very good	50%	46%	58%	54%

Legend: ■ Very good ■ Good □ Adequate ■ Poor ■ Very poor

6. Main findings and recommendations for future training courses

6.1 Content of the Course

Since most of the participants in this training course are statisticians or professionals who work with statistics on a daily basis, their focus is more on technical issues and on more complex statistical subjects, such as sample design and weighting.

6.2 Methodology

A number of participants found the group exercises and tests very useful; particularly in reinforcing their learning of the modules. They suggested having more time allocated to explaining modules 2, 3 and 4 and more examples and exercises on sampling design, sampling error and weight calculation. Some participants further suggested changing the group members for every exercise to learn more from experiences of other countries. It should be noted that during the training, the same group members were maintained but different group members reported on each group exercise.

Participants recommended including more hands-on examples on how the different parts of the survey design and implementation are carried out in countries and the use of a data set to conduct some exercises along the course. This would probably make them better understand the survey process of ICT statistics. This can be done using one country example, to be used for the whole course, highlighting the different stages of survey design, implementation and dissemination of results.

6.3 Final remarks

The delivery of the training is considered highly successful. The interest to collect, or expand the collection of, ICT statistics was high among the participants from the region. It is to be expected that several of the countries will be able to produce a number of the ICT core indicators in the near future. Some countries may request further technical assistance from ITU, for example in the preparation and design of their questionnaires. Countries also requested bringing the training to the Pacific countries where more countries with similar levels (both economic and NSO capacity) can participate and share experiences. They suggested conducting the training course in collaboration with the Secretariat of the Pacific Community (SPC).

The training course itself was appreciated highly. Since this was the first time[3] the course was delivered in the region, an important conclusion is that the course can be considered as a useful capacity building tool available for ICT data producers in developing countries. However, taking into account comments made by the trainer and participants, some adjustments will be made to improve the course material (presentation slides, tests, group exercises) and the delivery. Useful comments were also received from the instructor and participants concerning the Manual, which will be taken into consideration when revising it.

As a follow-up, it may be considered offering a refresher course for countries that participated in the training. This follow-up course could focus on countries that already started to collect ICT household data following the training, and could be used to share experiences. It could also be used to improve the delivery of similar trainings in the future and the training materials, including the manual.

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[3] See footnote 1 for reference to the UNCTAD training course delivered in the region in 2008; http://new.unctad.org/templates/Event____887.aspx

Annex 1. Final Evaluation

QUESTION 1

Q1. Duration:	Number of answers	Percentage
Too Long	0	0%
Long enough	16	62%
Too short	10	38%

QUESTION 2

Q.2 Number of participants:	Number of answers	Percentage
Too high	2	8%
Adequate	24	92%
Too low	0	0%

QUESTION 3

Suggestions of change	Number of answers	Percentage
yes	15	58%
No	11	42%

QUESTION 4

Q4. Technical content	Number of answers	Percentage
Overall		
very good	7	28%
good	14	54%
adequate	4	14%
poor	0	0%
very poor	0	0%
No reply	1	4%
coverage of the topic		
very good	8	31%
good	15	58%
adequate	3	12%
poor	0	0%
very poor	0	0%
No reply	0	0%
technical level		
very good	8	31%
good	11	42%
adequate	6	23%
poor	0	0%
very poor	0	0%
No reply	1	4%

accuracy		
very good	6	23%
good	16	62%
adequate	2	8%
poor	0	0%
very poor	0	0%
No reply	2	8%

QUESTION 5

Q5. Organisation	Number of answers	Percentage
very good	14	54%
good	10	38%
adequate	2	8%
poor	0	0%
very poor	0	0%

QUESTION 6

Q6. Support material	Number of answers	Percentage
Overall		
very good	10	38%
good	14	52%
adequate	2	8%
poor	0	0%
very poor	0	0%
Manual		
very good	13	50%
good	12	46%
adequate	1	4%
poor	0	0%
very poor	0	0%
Slides		
very good	7	27%
good	15	58%
adequate	3	12%
poor	0	0%
very poor	0	0%
No reply	1	4%

QUESTION 7

Q7. Methodology	Number of answers	Percentage
very good	11	42%
good	12	46%
adequate	3	12%
poor	0	0%
very poor	0	0%
No reply	0	0%

AGENDA

Monday, 19 October 2009

8:45 - 9:00   Registration of participants

9:00 - 10:45   **Opening session**
- Welcome (MICT Thailand, Rohan Samarajiva, LIRNEasia)
- Measuring ICT for Development (Susan Teltscher, ITU)
- ICT Statistics-An Indian perspective (Payal Malik, LIRNE*asia*)

10:45 - 11:00   *Break*

11:00 - 11:30   **Introduction to the course**
- *Contents, objectives and methodology*
- Presentation of instructor and participants

11:30 - 13:00   **Module H-1: Introduction to household ICT statistics. Survey planning and preparatory work**

13:00 - 14:00   *Lunch*

14:00 - 15:30   **Module H-1: Introduction to household ICT statistics. Survey planning and preparatory work (cont.)**

15:30 - 15:45   *Break*

15:45 - 17:00   **Module H-1: Introduction to household ICT statistics. Survey planning and preparatory work (cont.)**

17:00 - 17:30   Test and Evaluation

Tuesday, 20 October 2009

9:00 - 10:30   **Module H-2: Statistical standards and topics. Data sources and collection techniques**

10:30 - 10:45   *Break*

10:45 - 13:00   **Module H-2: Statistical standards and topics. Data sources and collection techniques (cont.)**

13:00 - 14:00   *Lunch*

14:00 - 15:30   **Module H-2: Statistical standards and topics. Data sources and collection techniques (cont.)**

15:30 - 15:45   *Break*

15:45 - 17:00   **Module H-2: Statistical standards and topics. Data sources and collection techniques (cont.)**

17:00 - 17:30   Test and evaluation

	Wednesday, 21 October 2009
9:00 - 10:30	**Module H-3: Questionnaire design. Household Survey design**
10:30 - 10:45	*Break*
10:45 - 13:00	**Module H-3: Questionnaire design. Household Survey design (cont.)**
13:00 - 14:00	*Lunch*
14:00 - 15:30	**Module H-3: Questionnaire design. Household Survey design (cont.)**
15:30 - 15:45	*Break*
15:45 - 17:00	**Module H-3 Questionnaire design. Household Survey design (cont.)**
17:00 - 17:30	Test and evaluation

	Thursday, 22 October 2009
9:00 - 10:30	**Module H-4: Data processing. Data quality and evaluation**
10:30 - 10:45	*Break*
10:45 - 13:00	**Module H-4: Data processing. Data quality and evaluation (cont.)**
13:00 - 14:00	*Lunch*
14:00 - 15:30	**Module H-4: Data processing. Data quality and evaluation (cont.)**
15:30 - 15:45	*Break*
15:45 - 17:00	**Module H-4: Data processing. Data quality and evaluation (cont.)**
17:00 - 17:30	Test and evaluation

	Friday, 23 October 2009
9:00 - 10:30	**Module H-5: Data dissemination**
10:30 - 10:45	*Break*
10:45 - 12:30	**Module H-5: Data dissemination (cont)**
12:30 - 13:00	Test and evaluation
13:00 - 14:00	*Lunch*
14:00 - 15:00	**Final course evaluation and discussion**
15:00 - 16:00	**Closing remarks** **Handing out of Training Certificates**

Annex 3. List of Participants

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