

OUTLINE

- **Role of UNESCO/UIS: Why measure ICT in education?**
 - Identifying educational priorities and guiding policy development
 - International, regional and national commitments;
- **ICT in education- Process/History**
 - Latin America and the Caribbean, Asia, Arab States, Africa (East & West);
- **The ICT4E questionnaire**
 - **(1)** Policy and Curriculum **(2)** Educational Expenditures **(3)** Educational Institutions & ICT infrastructure **(4)** Enrolment and **(5)** teachers;
 - ISCED 2011
 - General and TVET programmes combined
- **The way forward**
 - Global survey

WHY MEASURE ICT IN EDUCATION

International Commitments :

WSIS Targets on education and their related indicators

Target 2. Connect all secondary schools and primary schools with ICTs.

- 2.1 Proportion of schools with a radio used for educational purposes;
- 2.2 Proportion of schools with a television used for educational purposes;
- 2.3 Learners-to-computer ratio;
- 2.4 Proportion of schools with Internet access, by type of access.



WHY MEASURE ICT IN EDUCATION

International Commitments :

WSIS Targets on education and their related indicators

Target 7. Adapt all primary and secondary school curricula to meet the challenges of the information society, taking into account national circumstances.

- 7.1 Proportion of ICT-qualified teachers in schools;
- 7.2 Proportion of teachers trained to teach subjects using ICT;
- 7.3 Proportion of schools with computer-assisted instruction (CAI);
- 7.4 Proportion of schools with Internet-assisted instruction (IAI).



INITIAL CORE INDICATORS

ED1	Proportion of schools with a radio used for educational purposes (for ISCED level 1-3)
ED2	Proportion of schools with a TV used for educational purposes (for ISCED level 1-3)
ED3	Proportion of schools with a telephone communication facility (for ISCED level 1-3)
ED4	Learner-to-computer ratio in schools with CAI (for ISCED level 1-3)
ED4. bis	Learner-to-computer ratio (for ISCED level 1-3)
ED5	Proportion of schools with Internet access at school, by type (for ISCED level 1-3) <ul style="list-style-type: none">• Fixed narrowband Internet access (using modem dial-up, ISDN)• Fixed broadband Internet access (DSL, cable, other fixed broadband)• Both fixed narrowband and broadband Internet access
ED6	Proportion of learners who have access to the Internet at school (for ISCED level 1-3)
ED7	Proportion of learners enrolled by gender at the post-secondary non-tertiary and tertiary level in ICT-related fields (for ISCED level 4 and level 5- 6)
ED8	Proportion of ICT-qualified teachers in primary and secondary schools (for ISCED level 1-3)
EDR1	Proportion of schools with electricity (for ISCED level 1-3) --- <i>Reference indicator</i>

THE QUESTIONNAIRE (ISCED 1-3)

Questionnaire on Statistics of ICT4E

- **Coverage:**
 - Primary and secondary education (ISCED 1- 3)
 - All programmes: General + technical and vocational education and training (TVET)
 - Public & private (Total)
 - Public only
- **ISCED 2011 (implemented in 2014)**

The image shows the cover page of a questionnaire from the UNESCO Institute for Statistics. At the top left is the UNESCO logo and the text 'United Nations Educational, Scientific and Cultural Organization'. To the right is the 'UNESCO INSTITUTE for STATISTICS' logo. In the top right corner, it says 'UIS/E/ICT/2013' and 'Montreal, September 2013'. Below the logos is a 'Country:' field with a dropdown arrow. A teal banner across the middle contains the title 'QUESTIONNAIRE ON STATISTICS OF INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT) IN EDUCATION' and a sub-banner below it says 'Academic year ending in 2013 or most recent'. The main text explains the purpose of the questionnaire and lists six instructions for respondents. A legend defines codes: 'a' for category not applicable, 'm' for data missing, 'n' for quantity nil, and 'x' for data included in another category. It also notes that provisional figures should be marked with an asterisk. The final instruction is to contact the UIS at uis.survey@unesco.org for queries.

UNESCO
United Nations
Educational, Scientific and
Cultural Organization

UNESCO
INSTITUTE
for
STATISTICS

UIS/E/ICT/2013
Montreal, September 2013

Country: _____

QUESTIONNAIRE ON STATISTICS OF INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT) IN EDUCATION

Academic year ending in 2013 or most recent

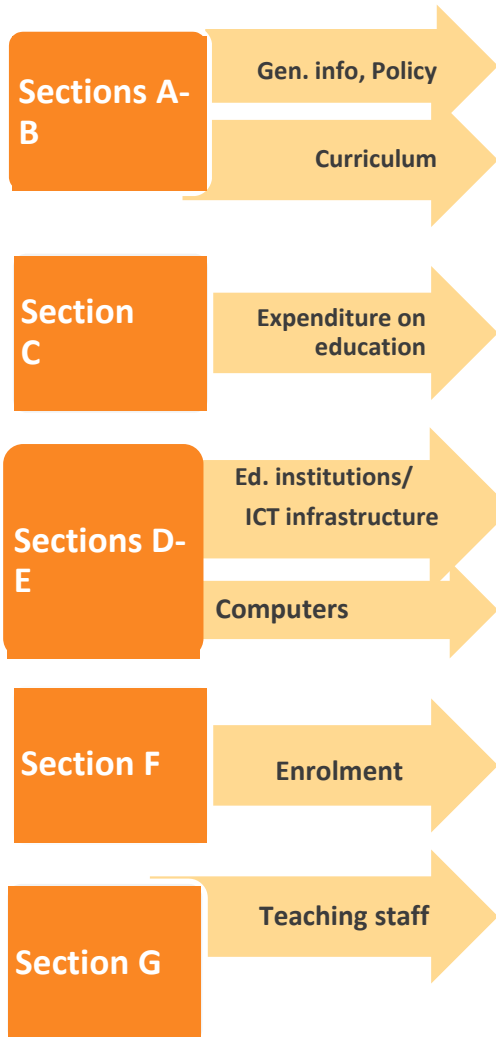
This questionnaire is designed to collect recent statistics in order to produce policy relevant indicators on key aspects of ICT in education. The data will be disseminated on the UNESCO Institute for Statistics (UIS) website and published in reports prepared by UNESCO, other UN agencies and public and private institutions or individuals.

1. Please return the completed questionnaire before **20 December 2013**. To submit the electronic questionnaire directly to the UIS, please click on the **[Submit]** button at the end of the questionnaire or email it to: uis.survey@unesco.org
2. The data reported in this questionnaire should cover all educational institutions and programmes (general and vocational) in your country. Please ensure that the data provided correspond to the data provided in the annual UIS Survey on Education Statistics and are mapped to the *International Standard Classification of Education (ISCED97)*. If data do not correspond, please provide a comment or explanation clearly identifying the data item and its source. The most recent mapping for your country is available at <http://www.uis.unesco.org/publications/iscedmaps>.
3. Adobe Reader 8.0 or greater is required to complete this questionnaire. Please refer to the [Glossary](#) and the [Data Entry Manual](#) before completing the questionnaire.
4. Please provide comments to explain data coverage or any errors that are flagged in the questionnaire. To enter comments in the electronic questionnaire, press the [Shift] key and left mouse button simultaneously.
5. Please do not leave any cell blank. The following codes should be used whenever figures are not available:
 - a = category is not applicable
 - m = data missing (or not available)
 - n = quantity nil
 - x = data included in another category (to be indicated with a comment)

Provisional or estimated figures should be marked with an asterisk (*).

6. For any queries concerning the questionnaire, please contact the UIS at: uis.survey@unesco.org

THE QUESTIONNAIRE (ISCED 1-3)



SECTION B. POLICY AND CURRICULUM

B.1 Does your institution provide the following types of programmes?
 National policy
 National plan
 National law
 Regulatory

B.2 Do any of the following apply to your institution?
 Gender
 Poor groups
 Rural areas
 Persons with disabilities
 Minority
 Other

B.3 Does your institution provide the following types of programmes?
 Select the boxes that apply:
 1
 2
 3
 4
 5
 6
 +
 Click on the box

B.4 Please indicate the total annual intended instructional time (in hours) for students for the following ISCED levels:
 All Subjects

SECTION C. GOVERNMENT EXPENDITURE

C.1 Please provide the following data for the total expenditure on education in your country for the year 2010/2011:
 Total expenditure
 Of which: ICT in education
 Current expenditure
 Capital expenditure
 Of which: Computer hardware
 ICT hardware
 Software

SECTION D. ICT INFRASTRUCTURE

D.1 Please provide the following data for the total number of computers in your country for the year 2010/2011:
 Total number of computers
 Of which: Electric
 Telephones
 Radio-assisted
 Television-assisted
 Computer-assisted
 Of which: Computer
 Local
 Web
 Open
 ICT support
 Access to Internet
 Broadband
 Wireless
 Narrowband

SECTION E. COMPUTERS

E.1 Please provide the following data for the total number of computers in your country for the year 2010/2011:
 Total number of computers
 Of which: Computers
 Computers
 Computers
 Computers

SECTION F. ENROLMENT

F.1 Please provide the following data for the total enrolment in your country for the year 2010/2011:
 Total enrolment
 Of which in programme:
 Radio-assisted
 Television-assisted
 Computer-assisted
 Internet-assisted
 Internet-assisted (with broadband)
 Open educational
 Basic computer skills

SECTION G. TEACHING STAFF

G.1 Please provide the following data for the total number of teachers in your country for the year 2010/2011:
 Total number of teachers
 Of which: Teaching basic computer skills or computing
 Using ICTs to teach
 Trained to teach basic computer skills or computing
 Trained in using ICTs to teach
 Trained using ICT-enabled distance education programmes
 Attended a training on ICTs in the past year

		Primary (ISCED 1)	Lower Secondary (ISCED 2)	Upper Secondary (ISCED 3)	Not specified	TOTAL
Total number of teachers	Both sexes					
	Female					
Of which:						
Teaching basic computer skills or computing	Both sexes					
	Female					
Using ICTs to teach	Both sexes					
	Female					
Trained to teach basic computer skills or computing	Both sexes					
	Female					
Trained in using ICTs to teach	Both sexes					
	Female					
Trained using ICT-enabled distance education programmes	Both sexes					
	Female					
Attended a training on ICTs in the past year	Both sexes					
	Female					

		Primary (ISCED 1)	Lower Secondary (ISCED 2)	Upper Secondary (ISCED 3)	Not specified	TOTAL
Total number of teachers	Both sexes					
	Female					
Of which:						
Teaching basic computer skills or computing	Both sexes					
	Female					
Using ICTs to teach	Both sexes					
	Female					
Trained to teach basic computer skills or computing	Both sexes					
	Female					
Trained in using ICTs to teach	Both sexes					
	Female					
Trained using ICT-enabled distance education programmes	Both sexes					
	Female					
Attended a training on ICTs in the past year	Both sexes					
	Female					

DATA SOURCES: CONSISTENCY ACROSS UIS INSTRUMENTS

Questionnaire A: Enrolments and teachers

Questionnaire B: Educational expenditures

Questionnaire C: Intended instructional hours

2014 SURVEY OF FORMAL EDUCATION
Intended instructional time

2014 SURVEY OF FORMAL EDUCATION
Educational expenditure (ISCED 0-8)
Data for the financial year ending in 2013

2014 SURVEY OF FORMAL EDUCATION
Regional module for Africa

2014 SURVEY OF FORMAL EDUCATION

Completed questionnaires should be sent by email attachment to: uis_survey@unesco.org
Data from previous surveys are available at: <http://www.uis.unesco.org>

Coverage
This questionnaire covers the entire formal education system in both public and private institutions within the country. The data provided should include both formal initial education programmes and formal adult education programmes. If data are not available for some parts of the education system, please make estimates to ensure full data coverage.

Academic year/reference period for the data collected in this questionnaire
This questionnaire collects data on the academic year ending in 2013 or a more recent year. If data are not available for 2013, please report the latest year for which data are available.

Using the Excel questionnaire
This questionnaire has been designed for optimal functionality in Microsoft Excel 2010 but can also be used with other versions of Excel. The questionnaire has been locked to preserve the layout and the integrity of the automatically calculated totals (shaded in blue) and validations. To the extent possible, data should be entered in the white cells only. If data are not available for a given category please use the missing codes described below.

Validation checks
The questionnaire contains validation checks using conditional formatting to highlight errors or invalid data entries. If further input is required, for example when a comment is needed to explain a missing code or if an error is detected in the data, the cell will turn yellow and/or a pop-up message will appear.

Structure of data items

SECTION B. POLICY AND CURRICULUM

B.1 Does your country have a national curriculum?

B.2 Do any of the following levels have a national curriculum?

B.3 Does the curriculum for the following levels include the following subjects?

B.4 Please indicate the total annual intended instructional time (in hours) for students for the following ISCED levels.

SECTION C. GOVERNMENT EXPENDITURE

C.1 Please indicate the total annual intended instructional time (in hours) for students for the following ISCED levels.

C.2 Do any of the following levels have a national curriculum?

C.3 Does the curriculum for the following levels include the following subjects?

SECTION D. ICT INFRASTRUCTURE

D.1 Please indicate the total annual intended instructional time (in hours) for students for the following ISCED levels.

D.2 Do any of the following levels have a national curriculum?

D.3 Does the curriculum for the following levels include the following subjects?

SECTION E. COMPUTERS

E.1 Please indicate the total annual intended instructional time (in hours) for students for the following ISCED levels.

E.2 Do any of the following levels have a national curriculum?

E.3 Does the curriculum for the following levels include the following subjects?

SECTION F. ENROLMENT

F.1 Please indicate the total annual intended instructional time (in hours) for students for the following ISCED levels.

F.2 Do any of the following levels have a national curriculum?

F.3 Does the curriculum for the following levels include the following subjects?

SECTION G. TEACHING STAFF

G.1 Please indicate the total annual intended instructional time (in hours) for students for the following ISCED levels.

G.2 Do any of the following levels have a national curriculum?

G.3 Does the curriculum for the following levels include the following subjects?

Table 1: Enrolment

	Both sexes	Male	Female
Total number of teachers			
Of which:			
Teaching basic computer skills or computing			
Using ICTs to teach			
Treated to learn basic computer skills or computing			
Treated to learn using ICTs to teach			
Treated using ICT-enabled distance education programmes			
Attended a training on ICTs in the past year			

Table 2: Teaching staff by gender and level of education - public and private institutions only

	Both sexes	Male	Female
Total number of teachers			
Of which:			
Teaching basic computer skills or computing			
Using ICTs to teach			
Treated to learn basic computer skills or computing			
Treated to learn using ICTs to teach			
Treated using ICT-enabled distance education programmes			
Attended a training on ICTs in the past year			

POLICY AND CURRICULUM

❖ Items B.1 – B.6

- ❖ What policies and systems are in place to promote effective use of ICT in education?
- ❖ What policies/plans/provisions are in place to integrate ICT into education systems?
- ❖ Are ICTs part of curriculum reform?
- ❖ How much instructional time is allocated to using ICTs?
- ❖ Are ICTs employed within accredited teacher training programmes?

POLICY AND CURRICULUM

B.1 Does your country have a national policy, plan, law or regulatory mechanism to promote and/or implement the integration of ICT in education? (please select all boxes that apply for each ISCED level)

	Primary (ISCED 1)	Lower Secondary (ISCED 2)	Upper Secondary (ISCED 3)
National policy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
National plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
National law	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Regulatory mechanism	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Tick ALL boxes that apply

POLICY AND CURRICULUM

B.2 Do any of the existing ICT in education policies, plans and/or laws address equality and/or equity in favour of the following? (please select all boxes that apply for each ISCED level)

	Primary (ISCED 1)	Lower Secondary (ISCED 2)	Upper Secondary (ISCED 3)
Gender	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Poor groups	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rural areas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Persons with special needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Minority	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If other, please specify: _____

POLICY AND CURRICULUM

B. 3 Does the education curriculum include a course on basic computer skills or computing?

	Primary (ISCED 1)	Lower Secondary (ISCED 2)	Upper Secondary (ISCED 3)
Select the levels which apply	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Tick ALL boxes that apply for each ISCED level

POLICY AND CURRICULUM

B. 4 Please indicate for which subjects and grades (all or some), recommendations exist to use ICTs to support teaching and/ or learning

	Primary (ISCED 1)	Lower Secondary (ISCED 2)	Upper Secondary (ISCED 3)
All Subjects			
<i>Of which:</i>	All grades		
	Some grades		
Mathematics	Not applicable		
Natural Sciences			
Social Sciences			
Reading, writing and literature			
Foreign Languages			

POLICY AND CURRICULUM

B.5 Please indicate the total annual intended instructional time (in hours) for students for the following ISCED Levels

	Primary (ISCED 1)	Lower Secondary (ISCED 2)	Upper Secondary (ISCED 3)
Annual intended instructional time for students (hours)	700	750	800
<i>Of which:</i>			
Basic computer skills or computing courses	50	60	85
Using ICTs (across the curriculum)	50	120	140
<i>Of which:</i>			
Using computers (across the curriculum)	50	130	120



Cells highlighted in red indicate a logical error

POLICY AND CURRICULUM

B.6 Does your country offer accredited teacher training programmes which include **ICT-enabled distance education components? If yes, please list the teacher training programmes and their associated ISCED levels which provide ICT-enabled distance education.**

	Name of programme	ISCED level (1, 2 or 3)
1		X
2		X
3		X
4		X
5		X
+		

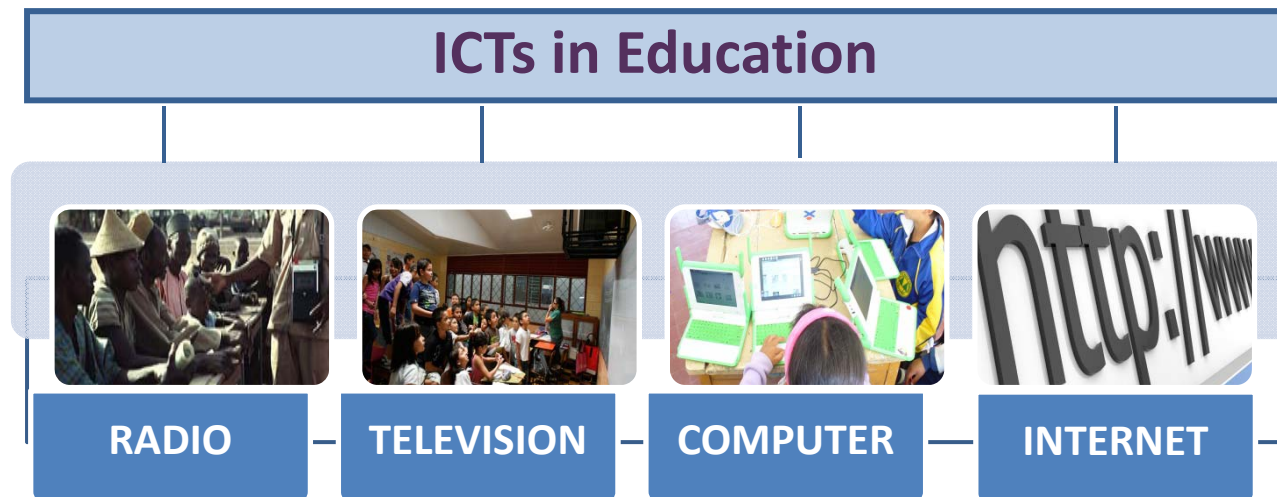
Click on '+' or 'x' to add or delete rows to the table.

QUESTIONS & LESSONS LEARNED

- Continue collecting data on ICT in education policies?
Differentiate between three types of policies/ plans?
 - ICT MASTER Plans that address education sector
 - Education Plans that address ICT integration
 - Specific ICT in education policy/ plans
- Policies/ plans may or may not be sector wide; difficult for countries to differentiate between policies and plans
- Regulatory mechanisms not well understood
- Curriculum data are more easy to collect: Which indicators can be calculated beyond proportion of hours devoted to ICT curriculum or learning using ICTs? However, since these are statutory data- data are a proxy for usage (how accurate?)

WHAT DO WE MEAN BY ICT IN EDUCATION: BASIC FRAMEWORK

ICTs in education refers to education models that employ ICTs to support, enhance and enable the delivery of education. Any, all or combinations of the following types of ICTs are included.



DEFINITIONS



RADIO-ASSISTED INSTRUCTION (RAI) includes both radio broadcast education and interactive radio instruction. Radio broadcast education entails an audio lecture or lesson, with printed material for pupils to follow the lecture. Broadcast programmes follow the traditional model of education and can cover every subject in many different languages, depending on the target audience. Interactive radio instruction (IRI) turns a typically one-way technology into a tool for active learning inside and outside the classroom. It requires that pupils react to questions and exercises through verbal responses to radio programme contributors, group work, and physical and intellectual activities while the programme is on air. The use of audio cassettes or CDs, which lessens much of the rigidity of a broadcast, may also form the basis of radio-assisted instruction.

DEFINITIONS



TELEVISION-ASSISTED INSTRUCTION (TAI) is similar to radio broadcast education, with the additional benefit of video. Television broadcasts helps to bring abstract concepts to life through clips, animations, simulations, visual effects and dramatization. It can also connect a classroom to the world but may share the same rigid scheduling and lack of interactivity as radio broadcast education. The use of video-cassettes or DVD's, which lessens much of the rigidity of a broadcast, may also form the basis of television-assisted instruction.

COMPUTER-ASSISTED INSTRUCTION (CAI) is an interactive learning method in which a computer is used by teachers and/or pupils to present instructional material, to perform tasks for learning and to help in selecting and accessing additional pedagogical material.

INTERNET-ASSISTED INSTRUCTION (IAI) refers to an interactive learning method using the Internet to deliver instructional materials through a computer or other devices, in accordance with learners' pedagogical needs. This mode of instruction helps to develop autonomy in research activities and information literacy skills.

EDUCATIONAL INSTITUTIONS AND ICT INFRASTRUCTURE/ FACILITIES

Completing the questionnaire

Table 3: Educational institutions and ICT infrastructure by level of education - **public and private institutions**

	Primary (ISCED 1)	Lower Secondary (ISCED 2)	Upper Secondary (ISCED 3)	Primary and secondary organizational units (ISCED 1, 2 and 3)
Total number of educational institutions	1305	1292	915	1441
<i>Of which with:</i>				
Electricity	1305	1292	915	1441
Telephone communication facility	1042	1034	425	1174
Radio-assisted instruction	1030	1000	400	980
Television-assisted instruction	1030	1000	400	980
Computer-assisted instruction	977	940	350	723
<i>Of which with:</i>				
Computer laboratory	977	940	350	723
Local Area Network (LAN)	20	x	350	365
Website	120	x	350	400
Open educational resources	n	n	n	n
ICT support services	m	m	m	m

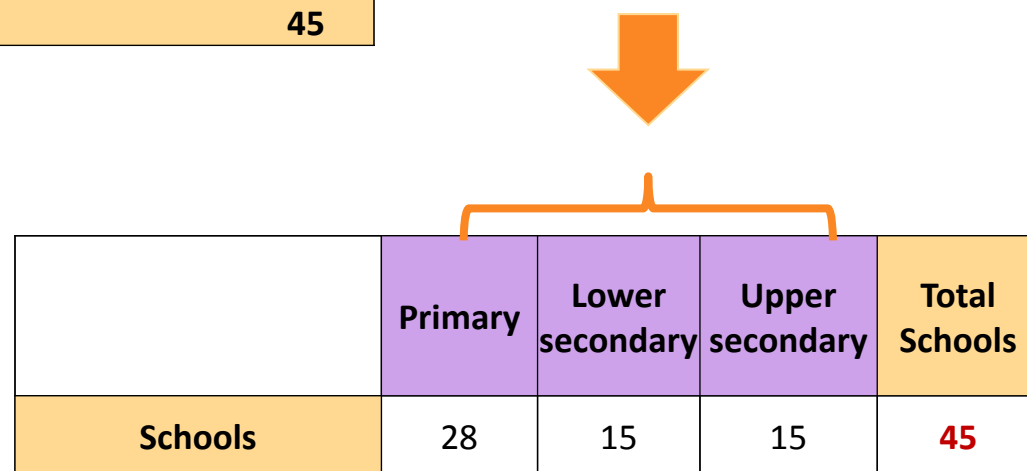


Figures in Column 4 are not necessarily the total sums of columns 1-3.

EDUCATIONAL INSTITUTIONS AND DOUBLE COUNTING

Types of schools	Total
Primary schools	20
Lower secondary schools	5
Upper secondary schools	10
Combined primary and lower secondary schools	5
Combined secondary schools	2
Combined primary and secondary schools	3
Total Schools	45

By double counting, the following numbers are obtained



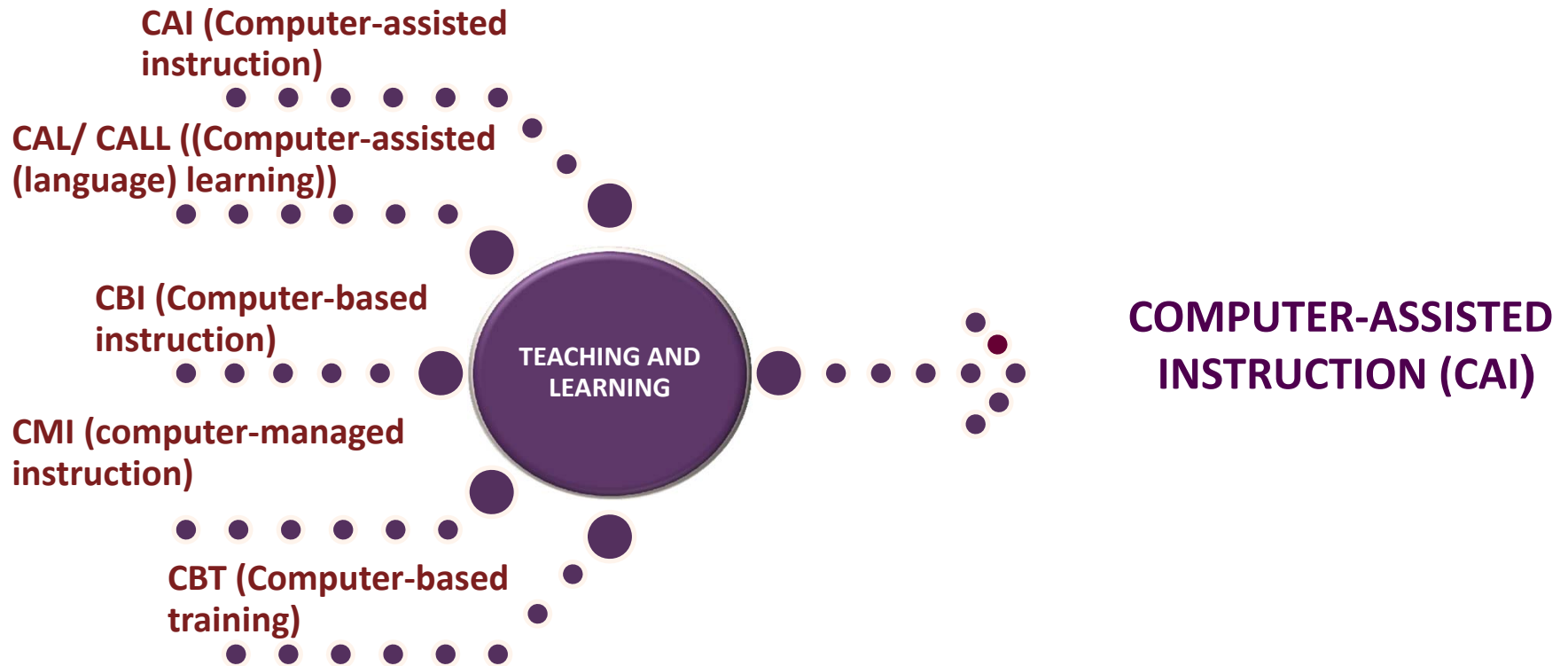
	Primary	Lower secondary	Upper secondary	Total Schools
Schools	28	15	15	45

Total schools- organizational units

DEFINITIONS

- Inclusion criteria for RAI, TAI, CAI and IAI are broad.
- In other words, any school or instructional educational institution that has a radio(s), television(s), or computer(s) available for educational (teaching and learning purposes), can be counted as having radio-assisted, television-assisted, or computer-assisted instruction.
- An educational institution that either has computers located in classrooms , libraries or a computer laboratory devoted to pedagogical use is counted as having computer-assisted instruction

DEFINITIONS

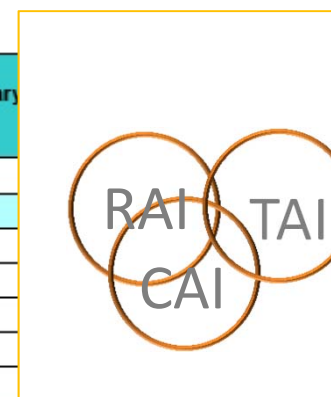


SECTION D: EDUCATIONAL INSTITUTIONS AND ICT FACILITIES

Completing the questionnaire:

Table 3 and 4: Educational institutions and ICT infrastructure by level of education

	Primary (ISCED 1)	Lower Secondary (ISCED 2)	Upper Secondary (ISCED 3)	
Total number of educational institutions	1305	1292	915	
<i>Of which with:</i>				
Electricity	1305	1292	915	
Telephone communication facility	1042	1034	425	
Radio-assisted instruction	1030	1000	400	
Television-assisted instruction	1030	1000	400	
Computer-assisted instruction	977	940	350	
<i>Of which with:</i>				
Computer laboratory	977	940	350	723
Local Area Network (LAN)	20	x	350	365
Website	120	x	350	400
Open educational resources	n	n	n	n
ICT support services	m	m	m	m



Categories are NOT mutually exclusive

E.g., an educational institution may have educational programmes which offer radio-assisted instruction and television and/or computer-assisted instruction

SECTION D: EDUCATIONAL INSTITUTIONS AND ICT FACILITIES

Completing the questionnaire:

Table 4: Educational institutions and ICT infrastructure by level of education - **public institutions only**

	Primary (ISCED 1)	Lower Secondary (ISCED 2)	Upper Secondary (ISCED 3)	Primary and secondary organizational units (ISCED 1, 2 and 3)
Total number of educational institutions	1270	1261	880	1396
<i>Of which with:</i>				
Electricity	1270	1261	880	1396
Telephone communication facility	1040	1032	723	1172
Radio-assisted instruction	756	890	560	1340
Television-assisted instruction	420	400	450	720
Computer-assisted instruction	330	700	560	980
<i>Of which with:</i>				
Computer laboratory	330	700	560	980
Local Area Network (LAN)	m	x	325	m
Website	200	550	500	600
Open educational resources	n	n	n	n
ICT support Services	m	m	m	m
Access to the Internet	160	345	500	750
<i>Of which with:</i>				
Internet-assisted instruction	160	345	500	650
Broadband Internet	50	135	100	300
Wireless broadband Internet	m	m	LowerSecondary	m
Narrowband Internet	50	300	200	700



The sum of broadband and narrowband Internet cannot be higher than Internet access and/or IAI. Red cells show logical errors in survey completion.

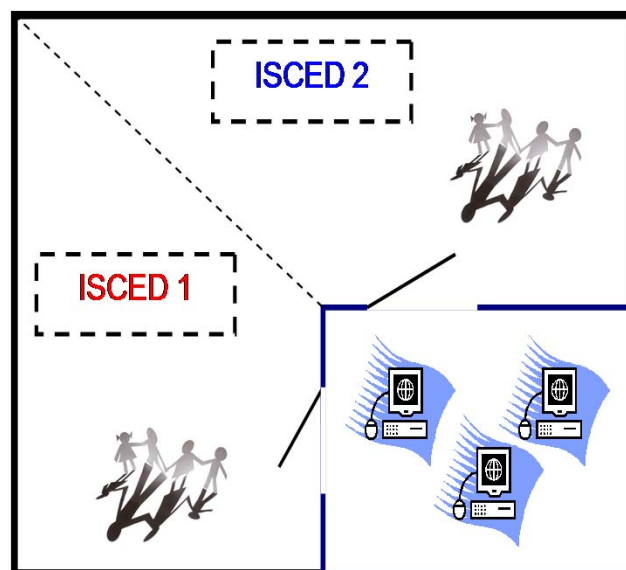
QUESTIONS & LESSONS LEARNED



- **Difficulty in interpreting RAI, TAI, CAI, IAI:** Concepts were selected to measure learning; however the concepts introduce too much bias in the data depending on respondent interpretation
- Measure radios, tvs, computers, Internet for teaching and learning?
- This table may require significant revision based on evolving technology
- Challenge is ensuring questionnaire has shelf-life, yet responds to evolving ICT tools
- Do we want to measure ICT types or broad families of ICT tools that may potentially affect teaching and learning in similar ways?

COMPUTERS

ISCED AND THE CHALLENGES IN COUNTING SHARED COMPUTERS – COMPUTERS SHOULD NOT BE DOUBLE-COUNTED



	ISCED 1	ISCED 2
Educational institutions	1	
Pupils enrolled	150	100
Computer labs	1	
Computers	10	
	ISCED 1	ISCED 2
Pupil (learner)-to-computer ratio	15	10



In order to measure access to computers, the total number of computers allocated to primary and secondary programmes should NOT be double counted. Therefore, if possible, computers should be allocated to each level of education.

COMPUTERS

Table 5: Computers allocated to educational programmes by level of education - **public and private institutions**

	Primary (ISCED 1)	Lower Secondary (ISCED 2)	Upper Secondary (ISCED 3)	Not specified	TOTAL
Total number of computers	500	1200	1500	800	4000
<i>Of which:</i>					
Computers for administrative use	300	600	500	500	1900
Computers for pedagogical use	200	600	1000	300	2100
<i>Of which:</i>					
Computers for pedagogical use connected to the internet	100	300	500	100	1000

If computers cannot be disaggregated by educational level, then please include them in the 'TOTAL' column.

Some or all computers may be used for both administrative and pedagogical purposes. Such computers should be included in counting.

Multi-seat computers should be counted according to seats since they provide multiple access points.

QUESTIONS?

- Count computers by type: desktops, laptops, tablets as a measure of counting mobile learning?
- How to count computers used both pedagogically and administratively?
- How to guide countries in estimating computers used by more than one ISCED level? (weighting by enrolment, instructional time, other factors?)

PRIMARY AND SECONDARY ENROLMENT (ISCED LEVELS 1-3)

Table 7 : Enrolment in programmes with ICT by gender and level of education - **public and private institutions**

		Primary (ISCED 1)	+	Lower Secondary (ISCED 2)	+	Upper Secondary (ISCED 3)	+	Not specified	=	TOTAL
Total enrolment	Both sexes	22713		11436		8488				42637
	Female	11146		5535		4421				21102
<i>Of which in programmes offering:</i>										
Radio-assisted instruction	Both sexes	22713		11436		8488				42637
	Female	11146		5535		4421				21102
Television-assisted instruction	Both sexes	22713		11436		8488				42637
	Female	11146		5535		4421				21102
Computer-assisted instruction	Both sexes	22713		11436		8488				42637
	Female	11146		5535		4421				21102
Internet-assisted instruction	Both sexes	m		11436		8488				m
	Female	m		m		m				m
Internet-assisted instruction (with broadband)	Both sexes	m		m		m				m
	Female	m		m		m				m
Open educational resources (OER)	Both sexes	n		n		n				
	Female	n		n		n				
Basic computer skills or computing	Both sexes	m		9800		8488				m
	Female	m		4000		4421				m



Figures in "Total" column are the sums of ISCED levels 1-3

PRIMARY AND SECONDARY ENROLMENT (ISCED LEVELS 1-3)

Table 8 : Enrolment in programmes with ICT by gender and level of education - **public institutions only**

		Primary (ISCED 1)	Lower Secondary (ISCED 2)	Upper Secondary (ISCED 3)	Not specified	TOTAL
Total enrolment	Both sexes	316618	117344	48140	RAI	482102
	Female	154614	58998	26471		240083
<i>Of which in programmes offering:</i>						
Radio-assisted instruction	Both sexes	316618	117344	48140	TAI	482102
	Female	154614	58998	26471		240083
Television-assisted instruction	Both sexes	316618	117344	48140	CAI	482102
	Female	154614	58998	26471		240083
Computer-assisted instruction	Both sexes	m	109154	43416	CBS	m
	Female	m	54852	21696		m
Internet-assisted instruction	Both sexes	m	90154	43416	IAI	m
	Female	m	43852	21696		m
Internet-assisted instruction (with broadband)	Both sexes	m	75235	38500	OER	m
	Female	m	36820	18230		m
Open educational resources (OER)	Both sexes	n	n	n		
	Female	n	n	n		
Basic computer skills or computing	Both sexes	m	86420	25000		m
	Female	m	42700	12200		m



RAI, TAI, CAI, IAI, OER, BCS are NOT mutually exclusive

MAPPING ENROLMENTS TO EDUCATIONAL INSTITUTIONS

- It is important to note that enrolment data for programmes with RAI, TAI, CAI, IAI, etc. should be mapped to educational institutions
- Therefore, the enrolment in programmes with CAI should correspond to those educational institutions that have CAI
 - Table 7 can be mapped to Table 3 (total schools to total enrolment)
 - Table 8 can be mapped to Table 4 (public schools to public enrolment)
- Total enrolments should correspond to data submitted in Questionnaire A; if not, please provide meta data explaining the reason.

SECTION G : TEACHING STAFF (ISCED LEVELS 1-3)

Teaching staff by gender and level of education - public and private institutions

		Primary (ISCED 1)	Lower Secondary (ISCED 2)	Upper Secondary (ISCED 3)	Not specified	TOTAL
Total number of teachers	Both sexes	15328	9834	2300		27462
	Female	10387	6939	1501		18827
Of which:						
Teaching basic computer skills or computing	Both sexes	9650	1389	975		12014
	Female	5912	841	567		7320
Using ICTs to teach	Both sexes	m	m	m		m
	Female	m	m	m		m
Trained to teach basic computer skills or computing	Both sexes	501	214	677		1392
	Female	401	100	157		658
Trained in using ICTs to teach	Both sexes	7000	1000	451		8451
	Female	5000	500	71		5571
Trained using ICT-enabled distance education programmes	Both sexes	a	a	157		157
	Female	a	a	144		144
Attended a training on ICTs in the past year	Both sexes	m	100	120		m
	Female	m	m	m		m



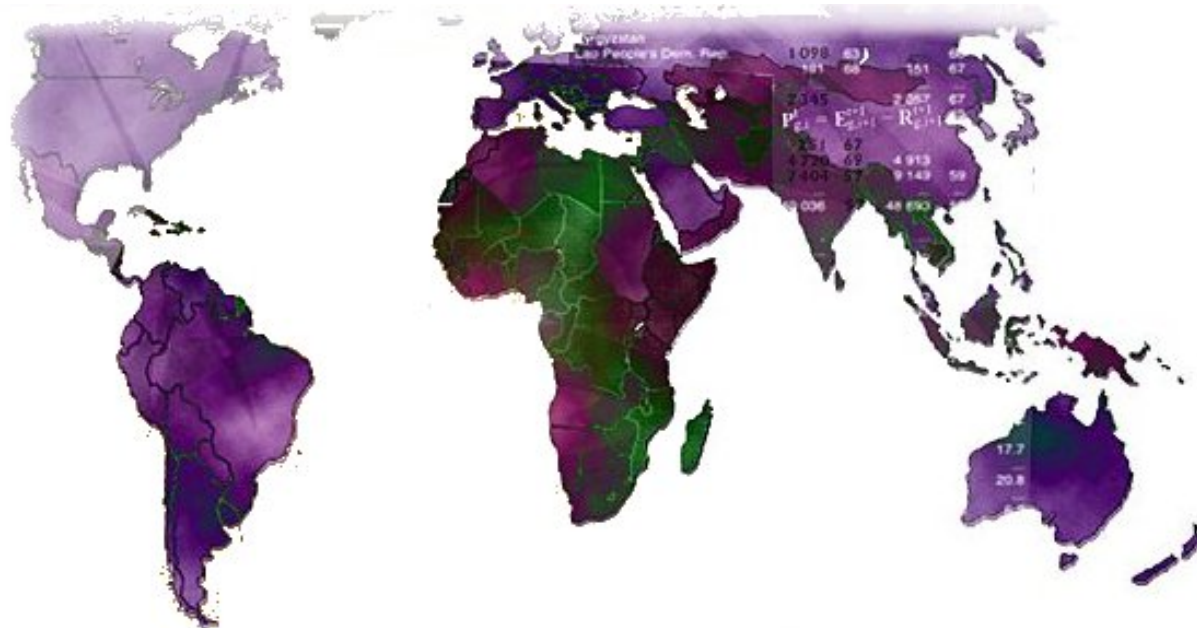
**Total number of teachers is NOT the sum of the rows underneath.
Total number of teachers is automatically summed based on teachers in each educational level.**

QUESTIONS & LESSONS LEARNED

- Teacher training requires meta data to contextualize:
 - What is a trained teacher?
 - What is an ICT qualified teacher?
 - What is a teacher trained to teach using ICT?

OTHER ISSUES

- How to better include gender beyond sex-disaggregated data?
- Survey does not address impacts including progression, completion, nor student achievement
- Usage is not addressed
- Require principal, teacher, or student surveys completed at the school level?



Thank you

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