Developments at the IEA DPC

Dirk Hastedt

IEA DPC
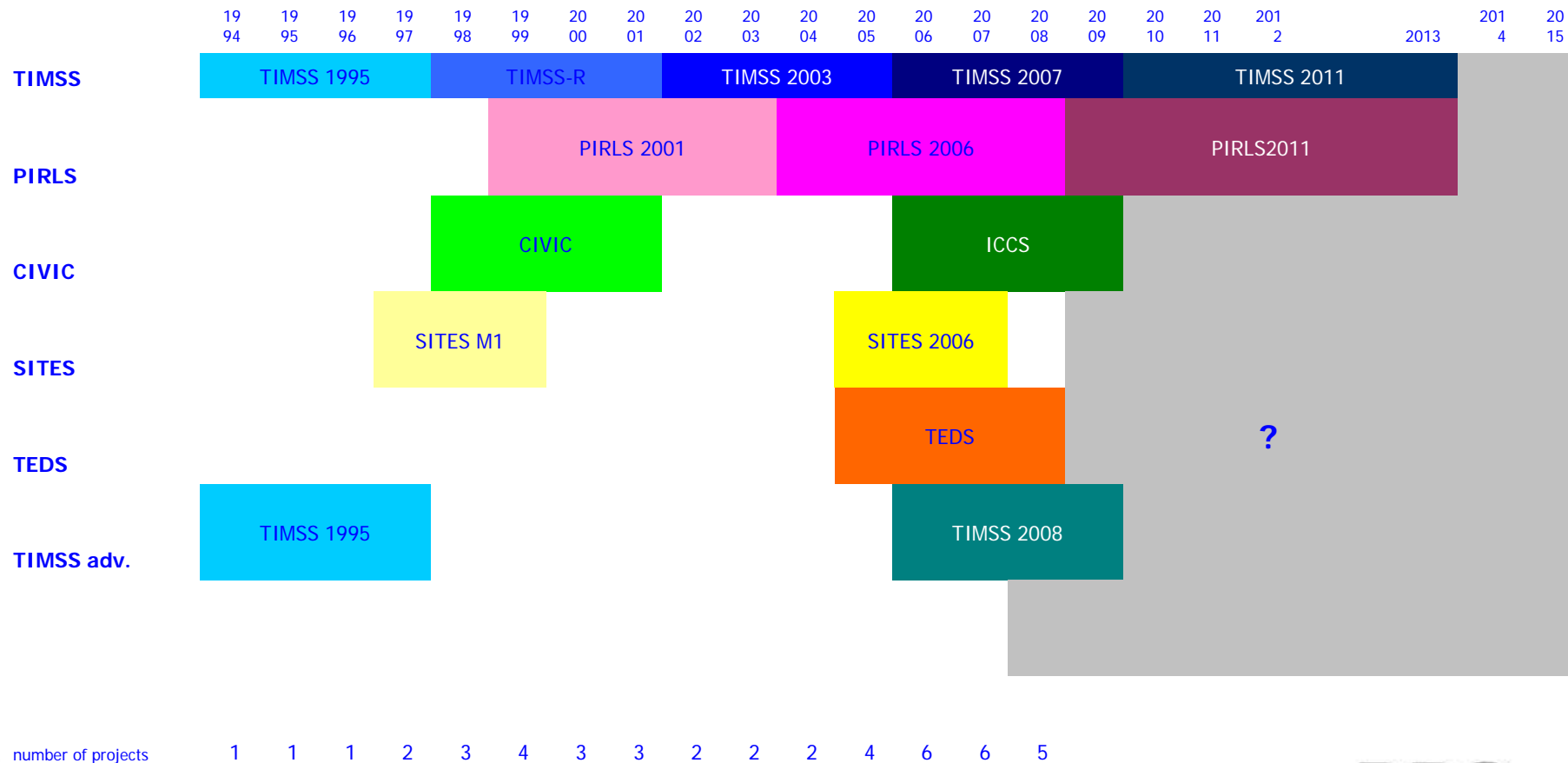
Outline

- Project development

- Staff and infrastructure development

- Support development

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IEA Projects at the DPC

	19 94	19 95	19 96	19 97	19 98	19 99	20 00	20 01	20 02	20 03	20 04	20 05	20 06	20 07	20 08	20 09	20 10	20 11	201 2	2013	201 4	20 15
TIMSS	TIMSS 1995				TIMSS-R			TIMSS 2003			TIMSS 2007				TIMSS 2011							
PIRLS						PIRLS 2001					PIRLS 2006				PIRLS2011							
CIVIC					CIVIC						ICCS											
SITES				SITES M1								SITES 2006										
TEDS											TEDS							**?**				
TIMSS adv.	TIMSS 1995										TIMSS 2008											

| number of projects | 1 | 1 | 1 | 2 | 3 | 4 | 3 | 3 | 2 | 2 | 2 | 4 | 6 | 6 | 5 | | | | | | | |

International Non-IEA Projects at the DPC

- OECD TALIS from 2006 on
  - Data Processing as well as Study Center at the DPC

- OECD PIAAC from 2008 on
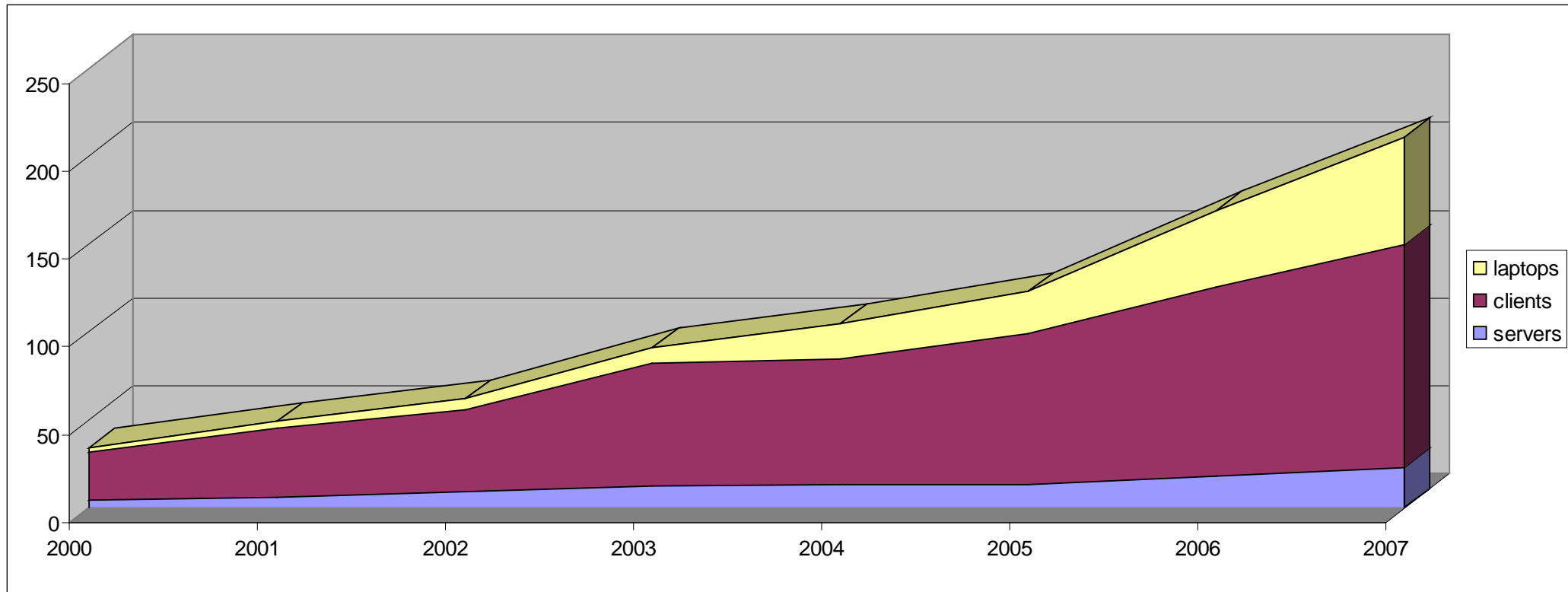 - As partner in a consortium lead by ETS

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Staff Development

Employees at the DPC
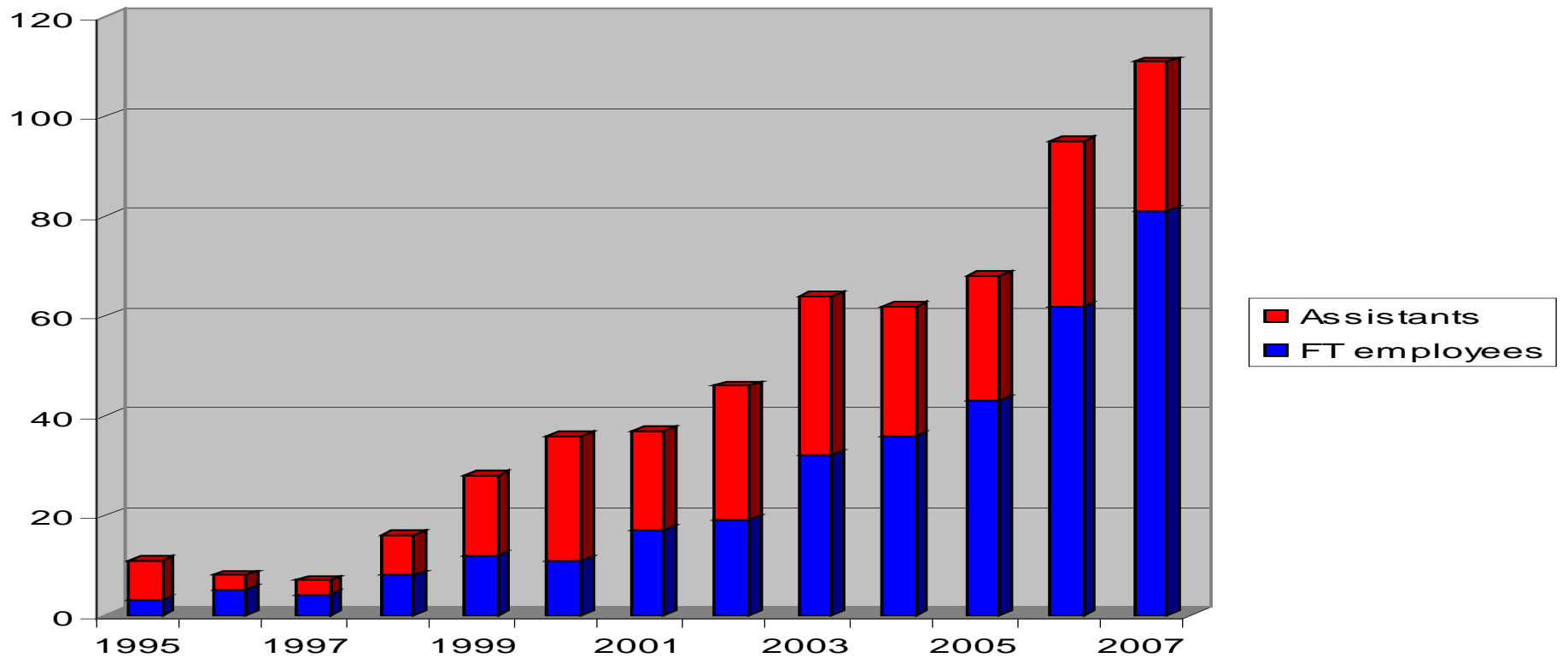
Hardware Development

Study Support Software Products of the IEA DPC

- WinDEM
- WinW3S
- Survey System
- IDB Analyzer
- ODA (NESSTAR)
- RMS

Software Products of the IEA DPC

- The first software developments of the IEA DPC were mostly driven by the demand for supporting the improvement of the quality of IEA survey data

- This was achieved through software for internal use at the IEA DPC and included software for within school sampling and data entry and management – the WinW3S and WinDEM software

WinDEM

- First DPC software for use in the participating countries
- **Win**dows based software for **d**ata **e**ntering **m**anagement
- First version was a DOS based program developed for the IEA Reading Literacy Study in 1989
- Now, powerful software to define and adapt file structures and to enter, verify and correct data

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WinDEM Usage in Defining Data Structures
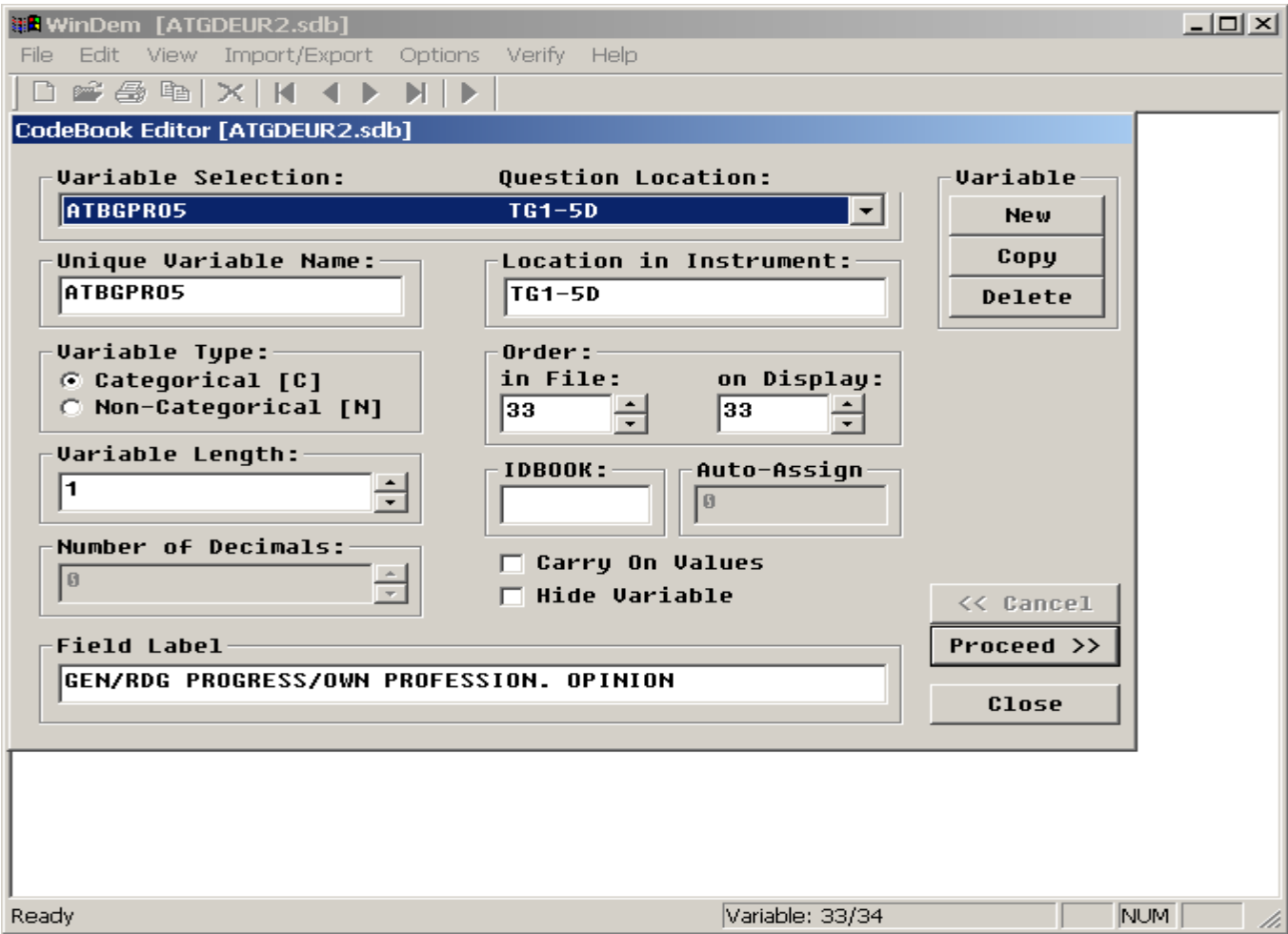
WinDEM is Used for Entering Data

WinW3S

- A **Win**dows based **w**ithin **s**chool **s**ampling **s**oftware.
- First version developed for TIMSS 1995 as a DOS applications
- Now the software samples students or teachers within schools/institutions, links teachers to students, creates labels and forms and tracks participation status

WinW3S is Used for Within School Sampling

WinW3S is Used to Rotate Booklets

Students in Class 000101

Student Name	IDStud	Month Of Birth	Year Of Birth	Sex	Exclusion Status	Booklet Name	Reliability Booklet	Participation Status Achievement Session
Nina R.	00010101	2	1996	1	9	10		0
Arne H.	00010102	11	1997	2	9	11		0
Marta S.	00010103	6	1997	1	9	12	R	0
Kathrin B.	00010104	4	1996	1	9	Reader		0
Bettina L.	00010105	1	1997	1	9	1		0
Stephan H.	00010106	3	1996	2	9	2	R	0
Hannah P.	00010107	5	1997	1	9	3		0
Christopher T.	00010108	3	1997	2	1	4	R	0
Sven J.	00010109	5	1996	2	9	Reader	R	0
<A>	00010110	0	0	0	9	5		0
<A>	00010111	0	0	0	9	6		0
<A>	00010112	0	0	0	9	7	R	0

WinW3S Creates all Necessary Lists

PIRLS 2006 (MS) - Class Listing Form

PIRLS Participant: GERMANY

School Name: Hamburg Gy

School ID: 0001

School Coordinator: **Brigite**

Phone: **(040) 5555-1212**

(1)	(2)
Class Name	Grade
4a	**4**
4b	**4**

PIRLS 2006 (MS) - Student Listing Form

PIRLS Participant: GERMANY

School Name: Hamburg Gymnasium

School ID: 0001

Class Name: 4a

Teacher Name: Karina Kroger

No.	(1) Student Name	(2) Date of Birth
01		
02		
03		
04		

WinW3S Creates all Necessary Labels

- ## School questionnaires

School Name:	Hamburg Gymnasium
School ID:	0001
Checksum:	131

- ## Teacher questionnaires

School ID:	0001
Class ID:	000101
Class:	4a
Teacher:	**Karina Kroger**
Teacher ID:	000101
Teacher Link Number:	01
Checksum:	963

- ## Student booklets and student & parent questionnaires

School ID: 0001	Class ID: 000101	Grade: 4	BOOKLET SET: A
Student:	**Marta S.**		
Booklet:	12 R		
Student ID:	00010103		
Checksum:	142		
Reliability Scorer ID (IDSCORR):			
Main Scorer ID (IDSCORA):			

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WinW3S and WinDEM

- Once WinW3S and WinDEM were separate programs. Now an integration process has been initiated.

- In previous studies data punchers in the countries had to enter redundant ID-information to assure correct identification.

- Now, WinW3S generates checksums that are also recognized by WinDEM (and also the Survey System) to avoid typos in the identification codes.

New demand: Internet Based Surveys

- In 2004 a new request was brought forward:

  Surveys should be delivered online

Survey System

- A system for creating online versions of questionnaires and administer them online
- Developed in 2004 for IEA SITES
- Allows the adaptation of an international version of a questionnaire and its translation
- Minimal requirements
- Login with ID and checksum created by WinW3S

Survey System Translation Module

Survey System (Multi-matrix Question)

17. Thinking about less formal professional development, during the last 18 months, did you participate in any of the following activities, and what was the impact of these activities on your development as a teacher?

For each question below, please mark one choice in part (A). If you answer 'Yes' in part (A) then please mark one choice in part (B) to indicate how much impact it had upon your development as a teacher.

	(A) Participation		(B) Impact			
	Yes	**No**	**No impact**	**A small impact**	**A moderate impact**	**A large impact**
a) Reading professional literature (e.g. journals, evidence-based papers, thesis papers)	○	○	○	○	○	○
b) Engaging in informal dialogue with your colleagues on how to improve your teaching	○	○	○	○	○	○

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Survey System (in Korean)

OECD 교수-학습 국제 조사(TALIS) - 본조사 - 한국어 (대한민국)
다음과 같이 로그인되었습니다 : 9999 로그아웃
학교장용 설문지 - 배경 정보

배경 정보

다음의 질문들은 교장선생님과 교장선생님의 교육 정도, 학교장으로서의 교장선생님의 직위에 관한 것입니다. 적합한 사각형에 표시하시어 질문에 답해주시기 바랍니다.

1. 교장선생님의 성은 무엇입니까?

여성   남성
○   ○

이전 문항   1/37 설문 목차   다음 문항

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Request for Easier Analysis of IEA Data

- In 2005 a further request was brought up.
- The IEA study data from complex sampling designs - also making use of the Plausible Value methodology - was challenging for researchers to analyze
- Researchers asked for assistants in analyzing data
- This request was met by offering an increasing number of training seminars but also by developing a software application...

IDB Analyzer

- The **I**nternational **D**ata**B**ase **Analyzer** is a software to combine and analyze data from complex samples (TIMSS, PIRLS, ...) correctly

- Based on SPSS macros developed for TIMSS 1995 by the TIMSS and PIRLS international study center

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IDB Analyzer GUI

IDB Analyzer Output

Predictors: REGBOOK REGSEX REGFBRN REGEDUP REGPOS / Predicte

Report

C:\Seminar\Hands-On\Merge\reg

▽

Predictors: REGBOOK REGSEX REGFBRN REGEDUP REGPOS / Predicte

COUNTRY ID	N of Cases	Mult_RSQ	Constant (estimate)	Constant (s.e.)	REGBOOK (estimate)	REGBOOK (s.e.)	REGBOOK (t-test)	REGSEX (estimate)	REGSEX (s.e.)	REGSEX (t-test)
Bahrain	3507	.11	364.40	7.50	7.09	1.36	5.22	-28.40	3.42	-8.3
Palestine	4618	.10	300.33	8.85	4.73	1.57	3.01	-5.15	5.70	-.
Jordan	3808	.16	367.92	8.58	7.58	1.51	5.01	-23.37	5.77	-4.
Lebanon	3017	.15	342.15	9.19	8.32	1.90	4.37	4.79	3.76	1
Morocco	2262	.05	9.23	9.82	-1.55	2.12	-.73	13.94	3.31	
Saudi Arabia	3605	.11	287.84	10.44	4.02	1.95	2.06	16.81	7.63	
Syria	3606	.10	289.16	6.74	3.83	1.40	2.74	8.73	4.47	
Tunesia	4232	.13	360.58	13.75	7.17	1.34	5.36	24.20	2.03	1
Egypt	5800	.20	307.69	7.00	-.36	1.52	-.24	3.18	4.67	

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New Request of Analyzing Data Online

- In 2007 another request was made.

- Reserachers and policy makers want to get a first glance at the IEA survey data without having to download it and run analysis software.

- Consequently a new devlopment was initiated...

ODA

- **O**nline **D**ata **A**nalyzer enables users to analyze IEA data online
- A system that creates tables and graphics also in downloadable format
- The results match the results of the international reports

ODA

ODA

ODA

Request of fast Data Access

- The growing amount and size of data files of the IEA surveys creates a new obstacle to work with the data.

- The size of the international data bases makes it difficult to download the files with Internet access which is not high speed.

- Consequently we developed a system to give easier access to the international IEA data bases

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RMS

- **R**epository **M**eta **S**earch is an online system to download data from IEA surveys.

- Data sets from different surveys, survey cycles and/or different countries can be selected in different data formats; a ZIP-archive will be created and provided for download

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RMS select Files

RMS zipped Basket

IEA Software:
the Full Package for the Cycle of a Study
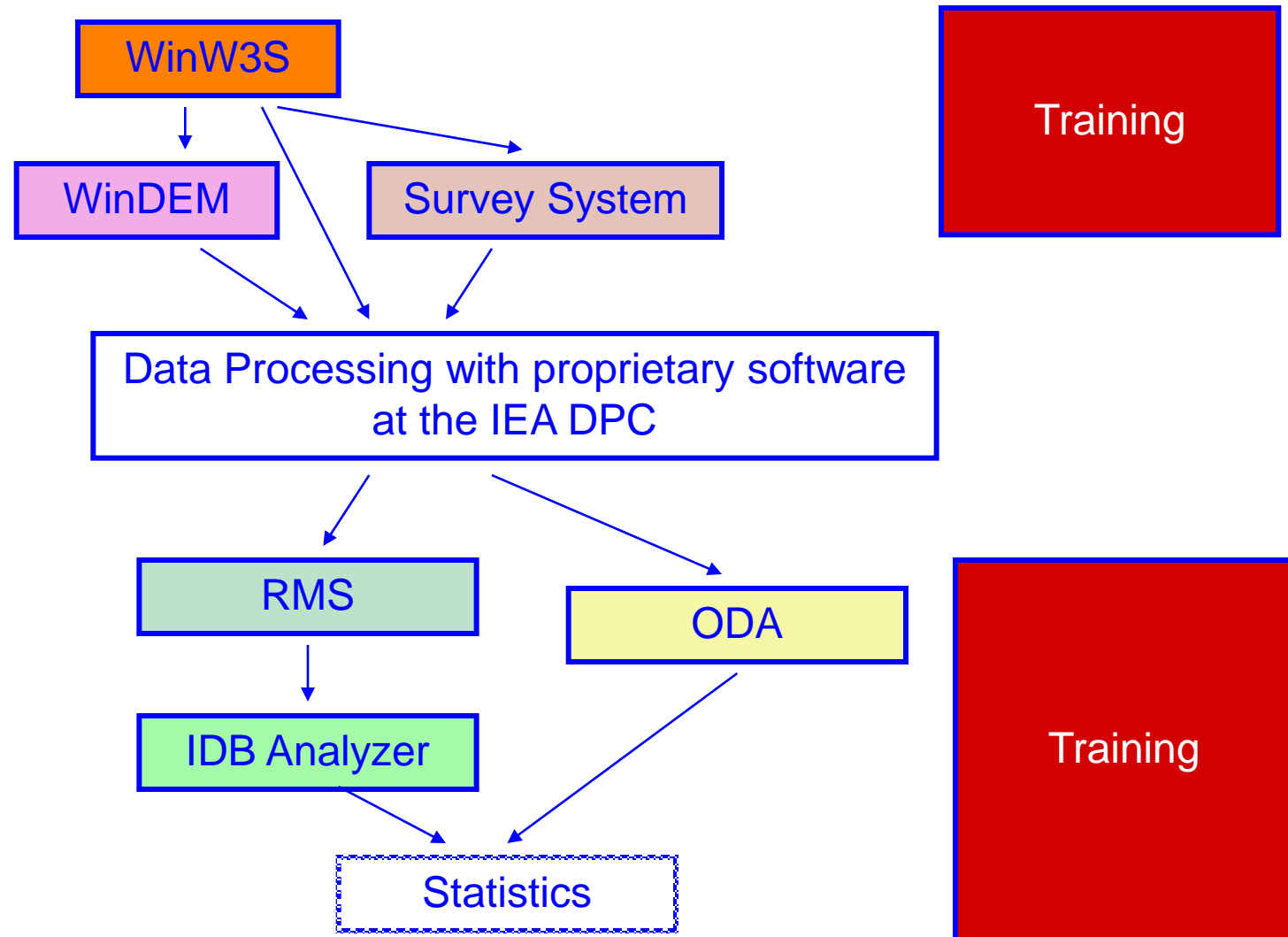
Thank you for your attention!