

Dissemination of the TIMSS trend study in Hungary

IEA GA
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Preliminaries, problems

- The research institutes in Hungary in charge of the assessment published several analyses and studies to disseminate the international data in the past decade
- Up to 2001 the international assessment of student performance received little response in the national media
- Educational decision makers, parent associations, school maintainers, teacher's associations paid limited attention to these international reports

Since 2002 there has been a significant change in the national dissemination of the international data

- As the effect of the PISA shock the national media started to show interest in other international research results. It was mainly due to the fact that on every possible forum the ministry referred to the data coming from IEA, WHO, UNESCO, OECD and from significant national assessments and surveys.
- In 2001 we implemented the national assessment of student performance in reading comprehension and mathematics. All schools are obliged to participate in this assessment and they get significant professional and financial support for the completion of the task from the MoE ,and from the Nat. Ed. Authority
- As a result of this support hundreds of teachers graduated from two-year university courses as experts in assessment and evaluation
- Today the public education sector more open for data and for the data and evidence based school development, as earlier

The dissemination of TIMSS trend study

- On the website of the National Educational Authority a new page was established. We started to work on this thematic pages like:
- PISA - Programme for International Student Assessment: www.oecd-pisa.hu.
- TIMSS - Trends in International Mathematics and Science Study: www.timss.hu
- PIRLS - Progress in International Reading Literacy Study): www.pirls.hu.
- Each page gives full account of the specific features of international surveys, provides the link to the international website, introduces the context of the survey, presents the available tasks and the international reports. Also available forum on this sites, and available to contact other countries thematic pages .

Publication of data

1. The preliminary information of the minister and state secretary on the survey
2. The press conference in Hungary took place at 10 o'clock on 11 December 2008 in the Ministry of Education and Culture
3. The information of the Media section of the ministry and the Hungarian National Press and media Institute
4. The ministry provides financial support for a national report to be compiled by the time of the national press conference following the international press conference (international data, sequences, relations, items types and both international and national conclusions are described for the public on 186 pages)
5. The language of the national report is expected to be readable and comprehensible for the non-experts as well, but it should be appropriately supported by data and diagrams
6. It is available in Hungarian <http://www.timss.hu/KMEO-TIMSS-2007.pdf>
7. The TIMSS national report is being translated into English and will be completed by the end of October and will be published on the website at the beginning of November



The national level dissemination of the conclusions of the report

8. News about the press conference on the ministry's website
9. TIMSS can be downloaded from the Hungarian website
10. Free copies of the report for the members of the Parliament's Education and Research Committee
11. A short analysis of the change in mathematics and science competencies was made for the education expert committee established by the president of the Hungarian republic
12. Free copies for all schools participating in the TIMSS 2007
13. At the December 2008 direct information and analysis was given to the members of all ministerial expert committees in education and culture (OKNT, KT, OKB, KÉT)
14. Free copies for university libraries, pedagogical and research institutions, pedagogical departments in higher education institutions

We haven't stopped dissemination at the above-described stage

Further steps:

1. In the 7 regions conferences were held to further disseminate the outcomes of the national assessments and the results of TIMSS, PIRLS and a PISA surveys together with the report (participants were the maintainers of schools, school directors, altogether about 100 persons/region)
2. One-day conference (two times) for the dissemination of the international reports (participants: teachers, educational experts, school maintainers,)
3. Two-day workshop was organised on the use of international assessment databases for educational researchers, sociologists. They also learnt about the principles and design of international assessment, the IEA IDB Analyzer program and the rules of data analysis.

We haven't stopped dissemination at the above-described stage

Further steps:

4. A serie of articles published in the 2009/1 issue of the periodical „New Pedagogic Review” under the title „The teaching of Mathematics and Science – TIMSS 2007”.
5. One-day conference organised by the mathematics and science university departments the topic of which was mathematics in public education compared to PISA/TIMSS surveys
 - results,
 - the methodology of assessment
 - the trends in student knowledge of science
 - the objectives and comparison of PISA/TIMSS surveys, the organisation of the Hungarian assessments and surveys
 - the utilisation of the conclusions in the field of developing mathematical thinking at primary and secondary school age

Dilemmas and professional and political debates in connection with the TIMSS-2007 results – also in the media, and in the parliament

Science

- The Hungarian students' achievement was significantly higher at both examined grades, in fact it was outstanding in comparison with the international average but there were debates about the results.

Why?

- The 14-year-olds' achievement is not different from the otherwise outstanding 1999 Hungarian achievement but there is a significant decrease (13 scores) compared to 2003.

Mathematics

- The Hungarian students' achievement was better at both examined grades than the international average, and the achievement at the 8th grade was outstanding, but..
- In the case of the 10-year-olds although the student performance surpasses the international average in the table showing the distribution of mathematics achievement there are 13 countries with significant results ahead of us, *our results are significant but they are decreased compared to the previous years.*
- In the case of 14-year-olds Hungarian students' achievement is in the forefront. significantly there are only 5 out of the 49 countries ahead of us. *Besides there is also a slight decrease in student achievement compared to 1995.*

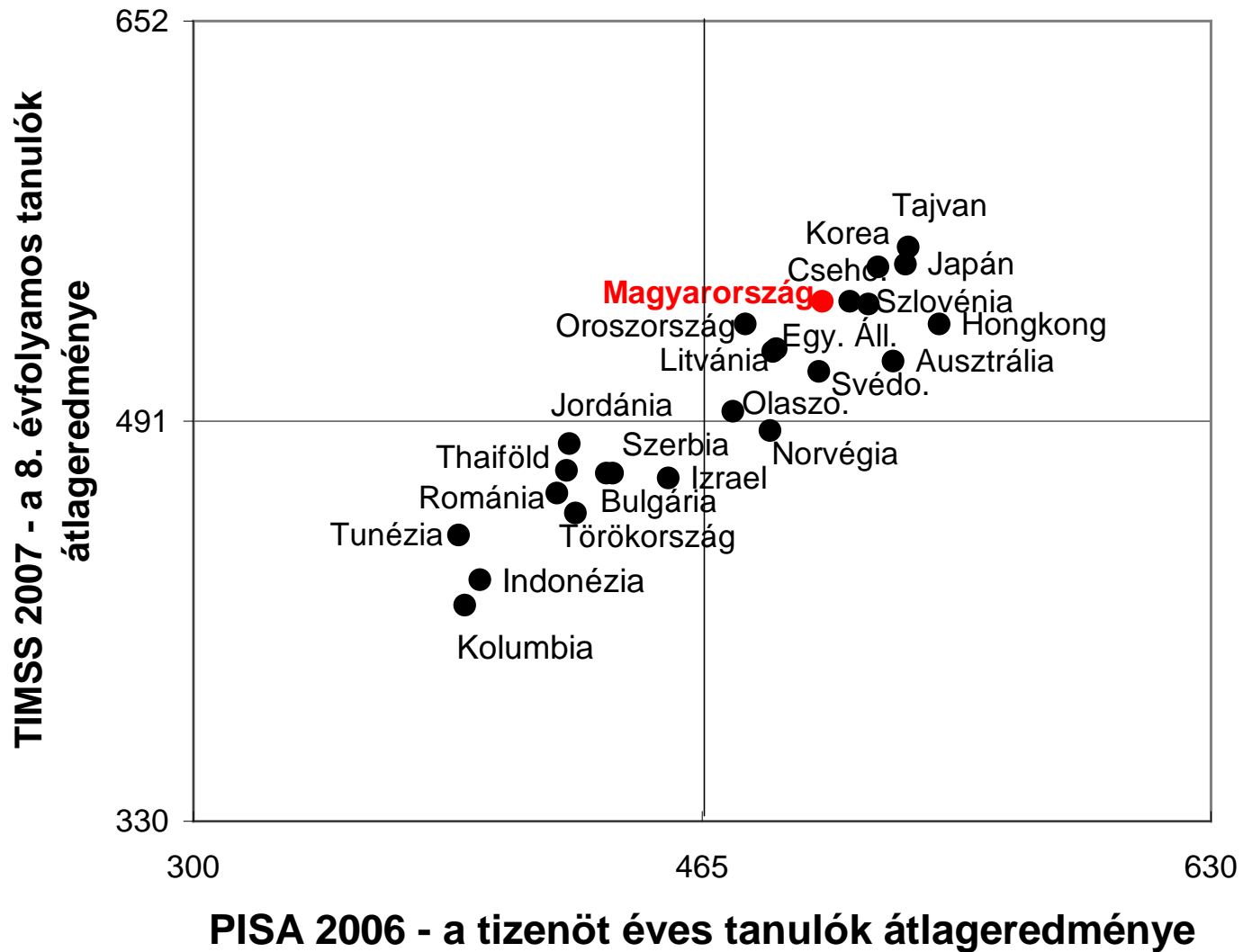
4. abra AZ ÁTLAGEREDMENYEK ALAKULÁSA 1995–2007 KÖZÖTT

Ország	Átlagpontszám		2007–2003 közötti különbség			2007–1999 közötti különbség			2007–1995 közötti különbség			Képességeloszlás				
	Érték	(s.d.)	Érték	(s.d.)	Állás	Érték	(s.d.)	Állás	Érték	(s.d.)	Állás	1	2	3	4	
Tajvan																
	2007	598	(4,5)													
	2003	585	(4,6)	13	(6,4)	▲										
	1999	585	(4,0)				13	(5,9)	▲							
Koreai Köztársaság																
	2007	597	(2,7)													
2	2003	589	(2,2)	8	(3,1)	▲										
	1999	587	(2,0)				10	(3,4)	▲							
	1995	581	(2,0)							17	(3,4)	▲				
Szingapúr																
	2007	593	(3,8)													
	2003	605	(3,6)	-13	(5,2)	▼										
	1999	604	(6,3)				-12	(7,2)								
	1995	609	(4,0)							-16	(5,6)	▼				
Hongkong																
†	2007	572	(5,8)													
†	2003	586	(3,3)	-14	(6,6)	▼										
†	1999	582	(4,3)				-10	(7,2)								
	1995	569	(6,1)							4	(8,4)					
Japán																
	2007	570	(2,4)													
	2003	570	(2,1)	0	(3,1)											
	1999	579	(1,7)				-9	(2,9)	▼							
	1995	581	(1,6)							-11	(2,8)	▼				
Magyarország																
	2007	517	(3,5)													
2	2003	529	(3,2)	-12	(4,7)	▼										
	1999	532	(3,7)				-15	(5,0)	▼							
	1995	527	(3,2)							-10	(4,7)	▼				

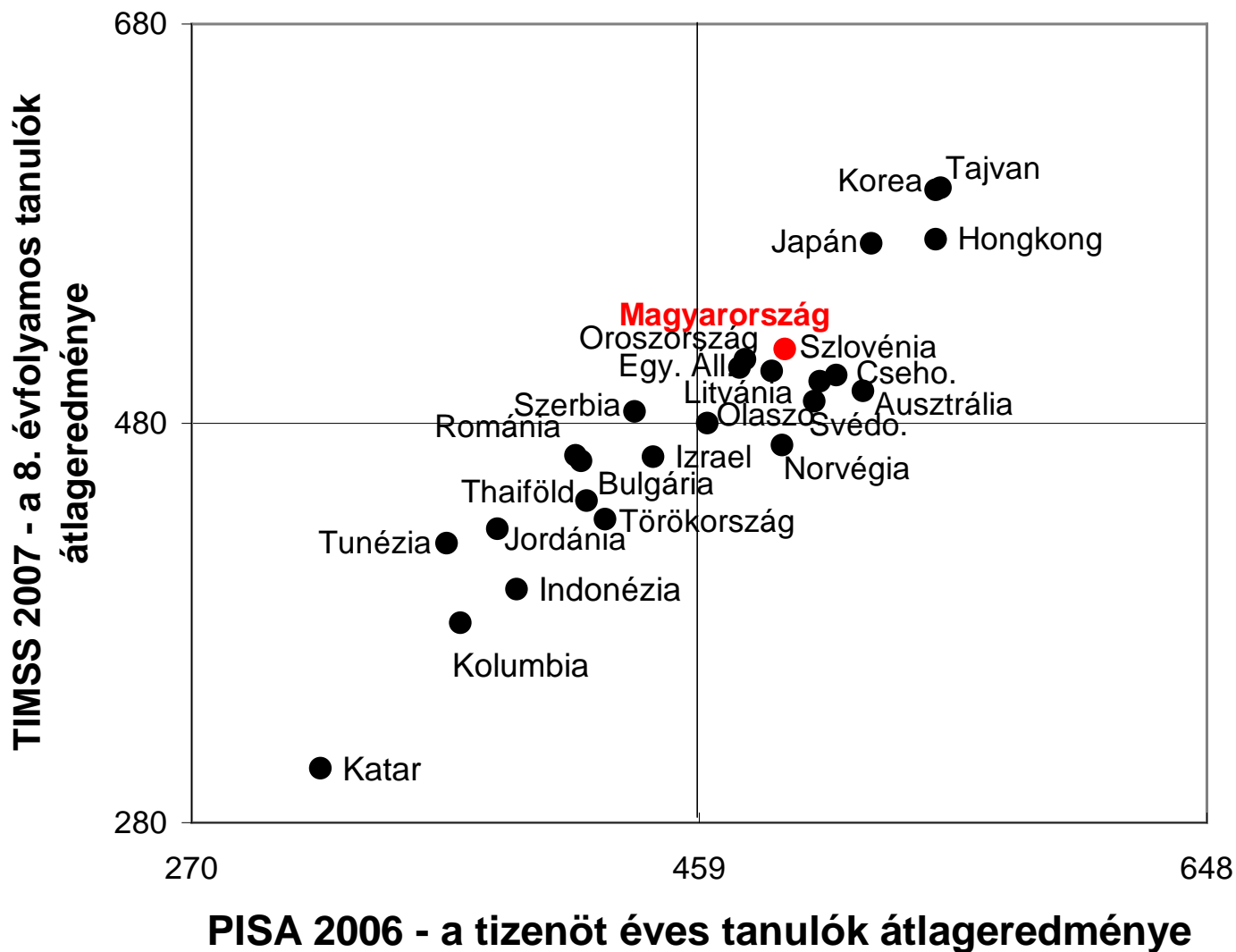
10. ábra Az átlageredmények alakulása 1995–2007 között

Ország	Átlagpontszám		2007–2003 közötti különbség		2007–1999 közötti különbség		2007–1995 közötti különbség		Képességeloszlás			
	Év	(SD)	Δ	(SD)	Δ	(SD)	Δ	(SD)	Képességeloszlás			
Szingapúr	2007	567 (4,4)							[Képességeloszlás]			
	2003	578 (4,3)	-11	(6,2)					[Képességeloszlás]			
	1999	568 (8,0)			-1	(9,2)			[Képességeloszlás]			
	1995	580 (5,5)					-13	(7,1)	[Képességeloszlás]			
Tajvan	2007	561 (3,7)							[Képességeloszlás]			
	2003	571 (3,5)	-10	(5,0)	⊕				[Képességeloszlás]			
	1999	569 (4,4)			-8	(5,6)			[Képességeloszlás]			
Japán	2007	554 (1,9)							[Képességeloszlás]			
	2003	552 (1,7)	2	(2,6)					[Képességeloszlás]			
	1999	550 (2,2)			4	(3,0)			[Képességeloszlás]			
	1995	554 (1,8)					-1	(2,5)	[Képességeloszlás]			
Koreai Köztársaság	2007	553 (2,0)							[Képességeloszlás]			
	2003	558 (1,6)	-5	(2,6)	⊕				[Képességeloszlás]			
	1999	549 (2,6)			4	(3,4)			[Képességeloszlás]			
	1995	546 (2,0)					7	(2,9)	⊙	[Képességeloszlás]		
Anglia	2007	542 (4,5)							[Képességeloszlás]			
	2003	544 (4,1)	-2	(6,1)					[Képességeloszlás]			
	1999	538 (4,8)			3	(6,5)			[Képességeloszlás]			
	1995	533 (3,6)					8	(5,7)	[Képességeloszlás]			
Magyarország	2007	539 (2,9)							[Képességeloszlás]			
	2003	543 (2,8)	-4	(4,0)					[Képességeloszlás]			
	1999	552 (3,7)			-13	(4,8)	⊕		[Képességeloszlás]			
	1995	537 (3,1)					2	(4,2)	[Képességeloszlás]			

A PISA 2006 és a TIMSS 2007 eredményeinek összehasonlítása természettudományból



A PISA 2006 és a TIMSS 2007 eredményeinek összehasonlítása matematikából



Debates on teacher training, the aging of active teachers and the methodology of the teaching instruction

Findings from TIMSS background variables:

- In Hungary 95% of fourth graders and 80% of eighth graders are taught by female mathematics teachers and 76% of them are taught by female science teachers. In international comparison it is a very negative ratio,
- In Hungary only a low percentage of students like mathematics in the fourth grade, and although achievement in mathematics is outstanding in the eighth grade, only 30 % of students have a positive attitude towards mathematics.,
- the self-confidence index of students in Hungary is only average or below average although the achievement good,
- Hungarian teachers of mathematics and especially of science mostly using textbooks during the lessons,
- Reduction of number of instruction time per year in 2002 (now there are above the int. average in all areas!)

Experiences

- More attention to the data and phenomena of the given trend
- Researchers at university pedagogy departments started to refer to data from 2003 and 1995
- Educational policy makers turn to the “long forgotten” data of TIMSS 1995, and others surveys
- Searching for the reasons of the decrease in achievement in maths
- More significant attention to teaching methodology
- More attention to the updating of science instruction in the classrooms
- Based on TIMSS trend data an OKNT research has been implemented to reveal problems in science instruction and teaching
- Ministerial program launched for the modernisation of science teaching in the classrooms
- TIMSS trend data have activated teacher associations of biology, chemistry and physics

Thank you for your attention!