

# Reading in transition period

## Estonian education after re-independence

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WWW.FREEWORLDMAPS.NET



# Singing Revolution in Estonia

<https://www.youtube.com/watch?v=Fp0h9Z97w1s>

# Countries in transition 80th-90th

1989 - Fall of Berlin wall - reuniting Germany

1989 – Poland, Hungary, Romania, Bulgaria

1990 – Dividing Czechoslovak Socialist Republik – Czech and Slovakia

1991 - Breakup of Yugoslavia, Balkan war - Croatia, Bosnia and Herzegovina, Macedonia, Serbia, Kosovo, Montenegro

1991- Dissolving Soviet Union – re-independence of Estonia, Latvia, Lithuania

1991 - Commonwealth of Independent States - Armenia, Azerbaijan, Kazakhstan, Kyrgyzstan, Moldova, Turkmenistan, Tajikistan, and Uzbekistan.

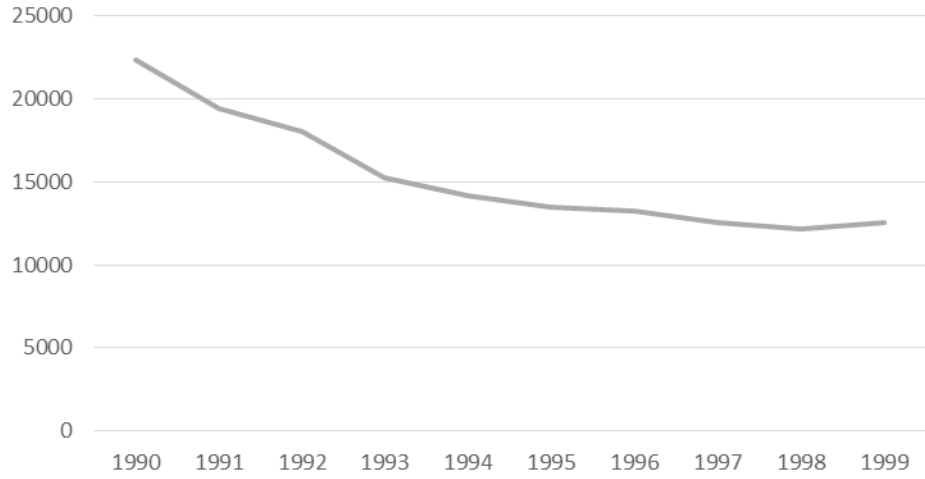
Participating states – Ukraine, Turkmenistan

Georgia joined 1993, withdrawn 2008

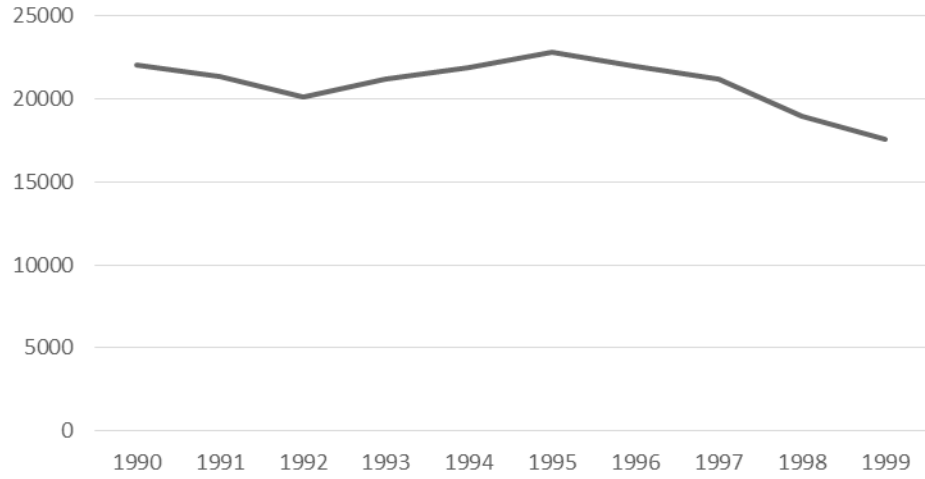
# Changes

- Political system – new constitution, governmental structure, real elections (1992), re-joining UN (1991), Russian troops left (1994), joining NATO (2004)
- Currency – Estonian Kroon (1992), EURO (2011)
- Globalization - borders opened, joining EU (call 1998, joining 2004), visa freedom with Shengen (1999), free labour migration
- Establishing professional organisations, joining international organisations (UNESCO, IRA, IFLA, IBBY)
- Changes in population and birth rate (1,57 min 1991, 1,38 min 1999, 1,32 min 2014)
- Economy – privatisation, unemployment, inflation
- Family economy – changes in expenditure structure, cuts for entertainment, culture and education

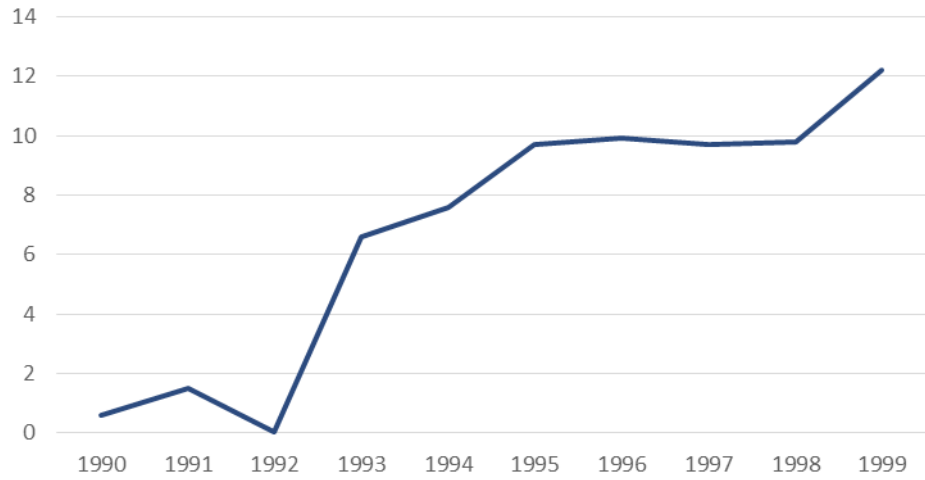
Birth rate



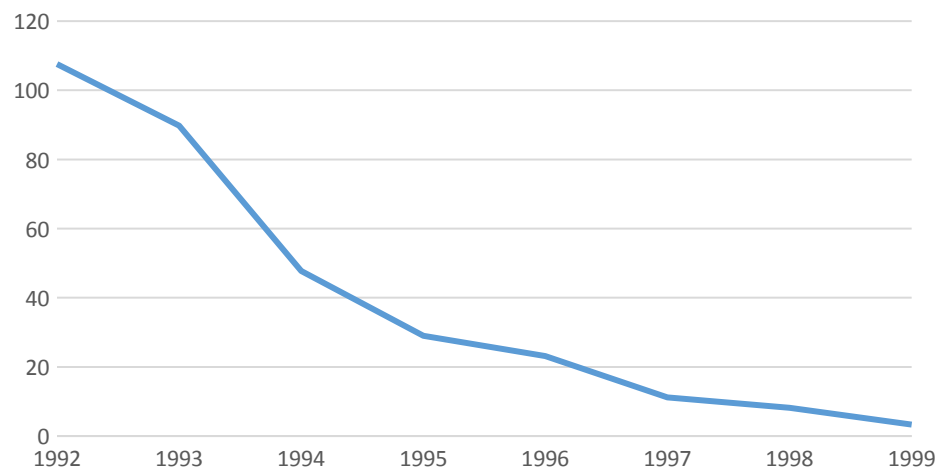
Nr of first graders



Unemployed (15-69)



Inflation

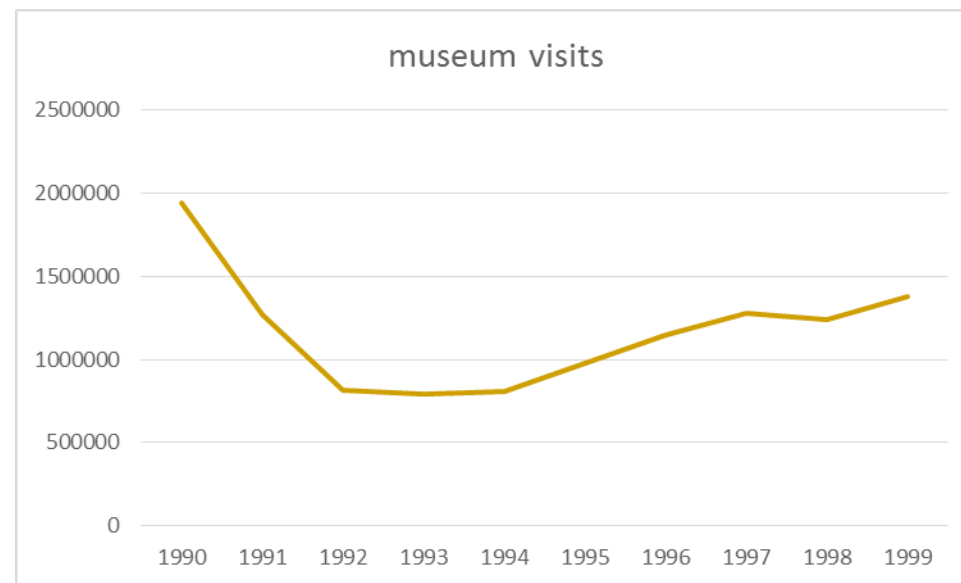
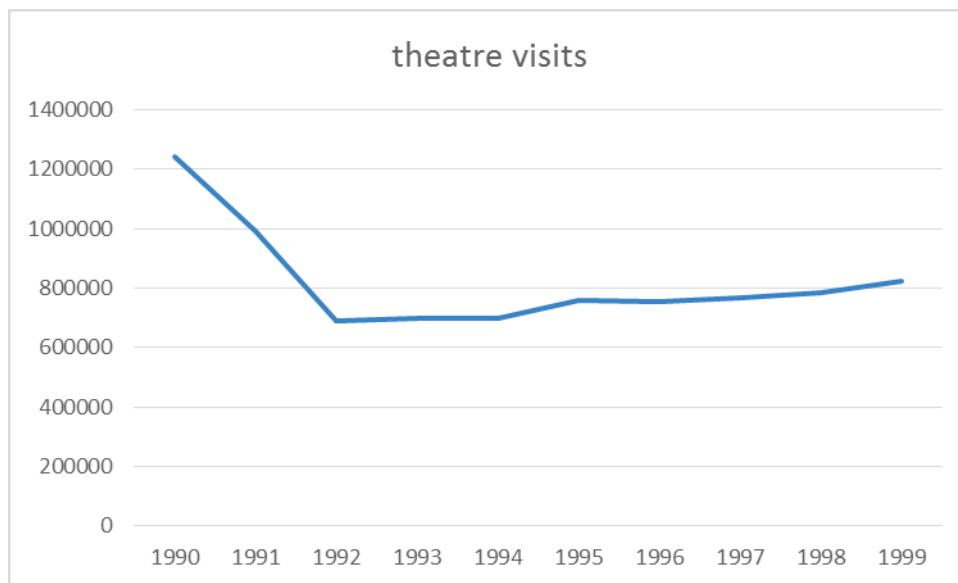


# Changes in Education

- Law – compulsory education up to 9 grades (before 11), gymnasium up to 12 grades, private education, paid education
- New curricula – implementation 89/90,
- Study materials – new ABC books, new textbooks, variety of textbooks in one grade/subject level
- Teaching methods – Step by Step, RWCT, Visual Thinking (mid 90th)
- Evaluation and testing – state exams and testing (1997), TIMSS (2002), PISA (2006; 2009, 2012) (repeating IEA/later PIRLS 1994), implementation of quality assurance and self evaluation systems in schools and kindergartens

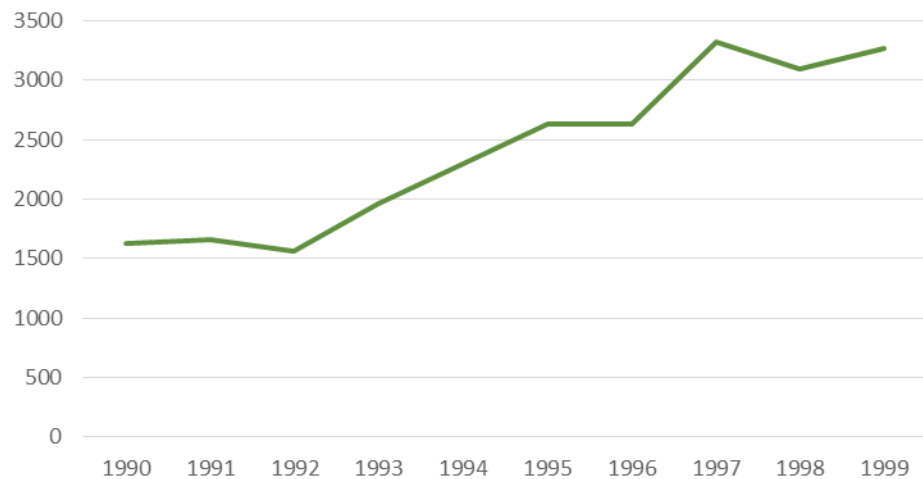
# Changes in culture and literacy environment

- Publishing – rapid growth in numbers and prices
- Newspapers and journals – rapid growth
- Media – private TV and radio channels, Soviet TV transmission stopped, News portals
- Culture use
- Library use

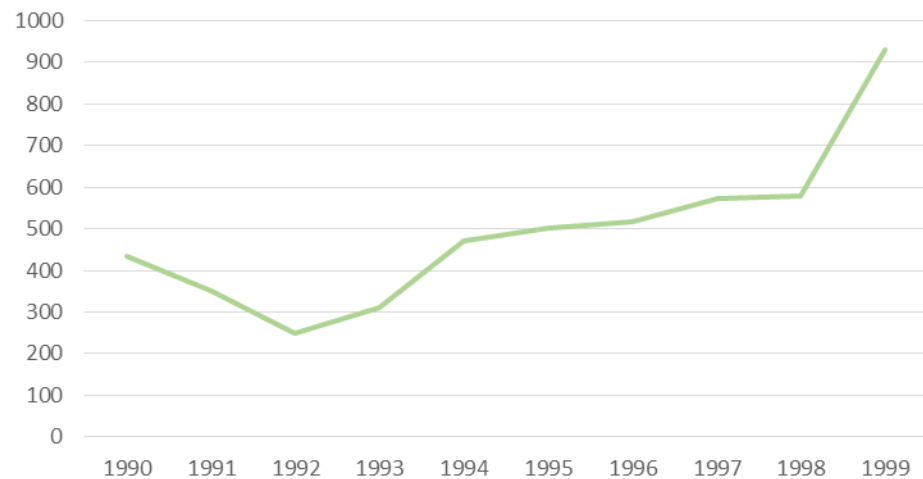




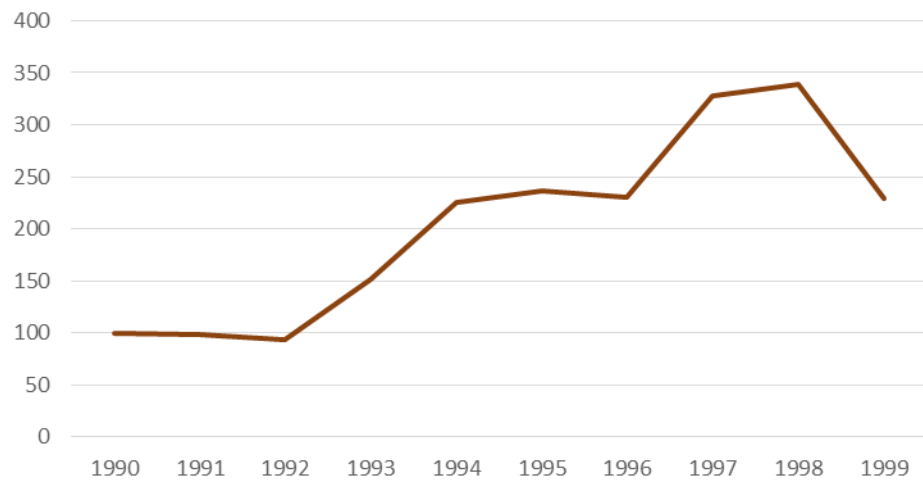
books publishing



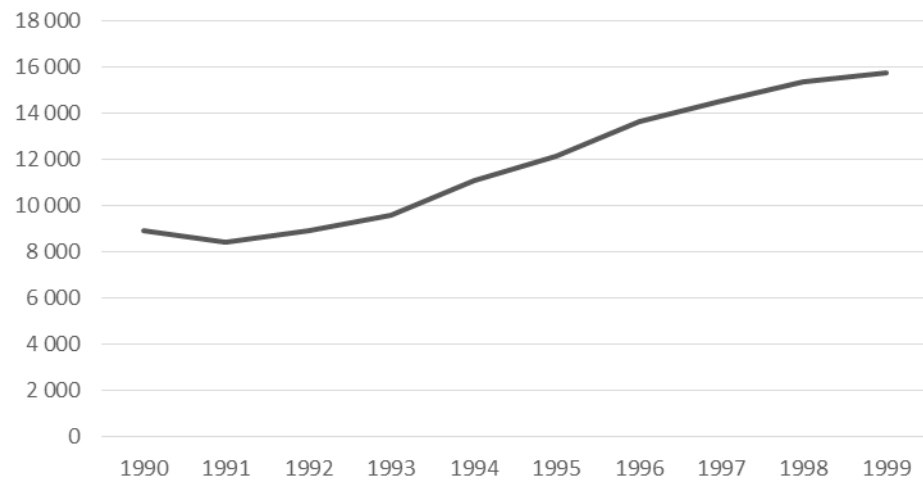
journals publishing



textbooks



library use



# Globalisation and IT

- Computerization and Internet access – open Internet points (1998), digital signature (2002), e-elections (2005), e-census
- Mobile phones from 3000 (1992) to 400 000 (1999), first network (1995)
- „Tiger Leap“ programme (1996) – the goal to have all schools in internet in 3 years (reached) and electronic study materials
- 2000 – 38% of population (6-74) is using Internet, 90% of students; 18% households have Internet
- 2002 - e-School , over 85 percent of Estonia's schools use, covering about 95 percent of all grade school students
- 2003 – Skype invented in Estonia



Living in a free World: They get a global experiences  
sometimes from the birth



Living in a Global World: They watch TV before learning to speak



Living in a IT World: They use computers before learning to talk and read

# Learning outcomes

- IEA 1992 (International Association for the Evaluation of Educational Achievement Study later PIRLS – Progress in International Learning Studies)
- TIMSS 2003 (Trends in International Mathematics and Science Study)
- PISA (OECD Program for International Student Assessment)
  - 2006 – Natural sciences
  - 2009 – Reading
  - 2012 - Math

# TIMSS 2003 ranking

Exhibit 1.1: Distribution of Science Achievement



Countries	Years of Schooling*	Average Age	Science Achievement Distribution	Average Scale Score	Human Development Index**
Singapore	8	14.3		578 (4.3) ▲	0.884
Chinese Taipei	8	14.2		571 (3.5) ▲	–
✦ Korea, Rep. of	8	14.6		558 (1.6) ▲	0.879
† Hong Kong, SAR	8	14.4		556 (3.0) ▲	0.889
Estonia	8	15.2		552 (2.5) ▲	0.833
Japan	8	14.4		552 (1.7) ▲	0.932
Hungary	8	14.5		543 (2.8) ▲	0.837
† Netherlands	8	14.3		536 (3.1) ▲	0.938
‡ United States	8	14.2		527 (3.1) ▲	0.937
Australia	8 or 9	13.9		527 (3.8) ▲	0.939
Sweden	8	14.9		524 (2.7) ▲	0.941
Slovenia	7 or 8	13.8		520 (1.8) ▲	0.881
New Zealand	8.5 - 9.5	14.1		520 (5.0) ▲	0.917
<sup>1</sup> Lithuania	8	14.9		519 (2.1) ▲	0.824
Slovak Republic	8	14.3		517 (3.2) ▲	0.836
Belgium (Flemish)	8	14.1		516 (2.5) ▲	0.937
Russian Federation	7 or 8	14.2		514 (3.7) ▲	0.779
Latvia	8	15.0		512 (2.6) ▲	0.811



# PISA 2006 ranking

Range of rank on the PISA 2006 science scale						
	Mean score	Standard error	OECD countries		All countries/economies	
			Upper Rank	Lower Rank	Upper Rank	Lower Rank
Finland	563	(2.0)	1	1	1	1
Hong Kong-China	542	(2.5)			2	2
Canada	534	(2.0)	2	3	3	6
Chinese Taipei	532	(3.6)			3	8
Estonia	531	(2.5)			3	8
Japan	531	(3.4)	2	5	3	9
New Zealand	530	(2.7)	2	5	3	9
Australia	527	(2.3)	4	7	5	10
Netherlands	525	(2.7)	4	7	6	11
Liechtenstein	522	(4.1)			6	14
Korea	522	(3.4)	5	9	7	13
Slovenia	519	(1.1)			10	13
Germany	516	(3.8)	7	13	10	19
United Kingdom	515	(2.3)	8	12	12	18
Czech Republic	513	(3.5)	8	14	12	20



# PISA 2009 ranking

	Statistically significantly <b>above</b> the OECD average
	Not statistically significantly different from the OECD average
	Statistically significantly <b>below</b> the OECD average

	On the overall reading scale	On the reading subscales					On the mathematics scale	On the science scale
		<i>Access and retrieve</i>	<i>Integrate and interpret</i>	<i>Reflect and evaluate</i>	<i>Continuous texts</i>	<i>Non-continuous texts</i>		
OECD average	493	495	493	494	494	493	496	501
Shanghai-China	556	549	558	557	564	539	600	575
Korea	539	542	541	542	538	542	546	538
Finland	536	532	538	536	535	535	541	554
Hong Kong-China	533	530	530	540	538	522	555	549
Singapore	526	526	525	529	522	539	562	542
Canada	524	517	522	535	524	527	527	529
New Zealand	521	521	517	531	518	532	519	532
Japan	520	530	520	521	520	518	529	539
Australia	515	513	513	523	513	524	514	527
Netherlands	508	519	504	510	506	514	526	522
Belgium	506	513	504	505	504	511	515	507
Norway	503	512	502	505	505	498	498	500
<b>Estonia</b>	<b>501</b>	<b>503</b>	<b>500</b>	<b>503</b>	<b>497</b>	<b>512</b>	<b>512</b>	<b>528</b>
Switzerland	501	505	502	497	498	505	534	517
Poland	500	500	503	498	502	496	495	508

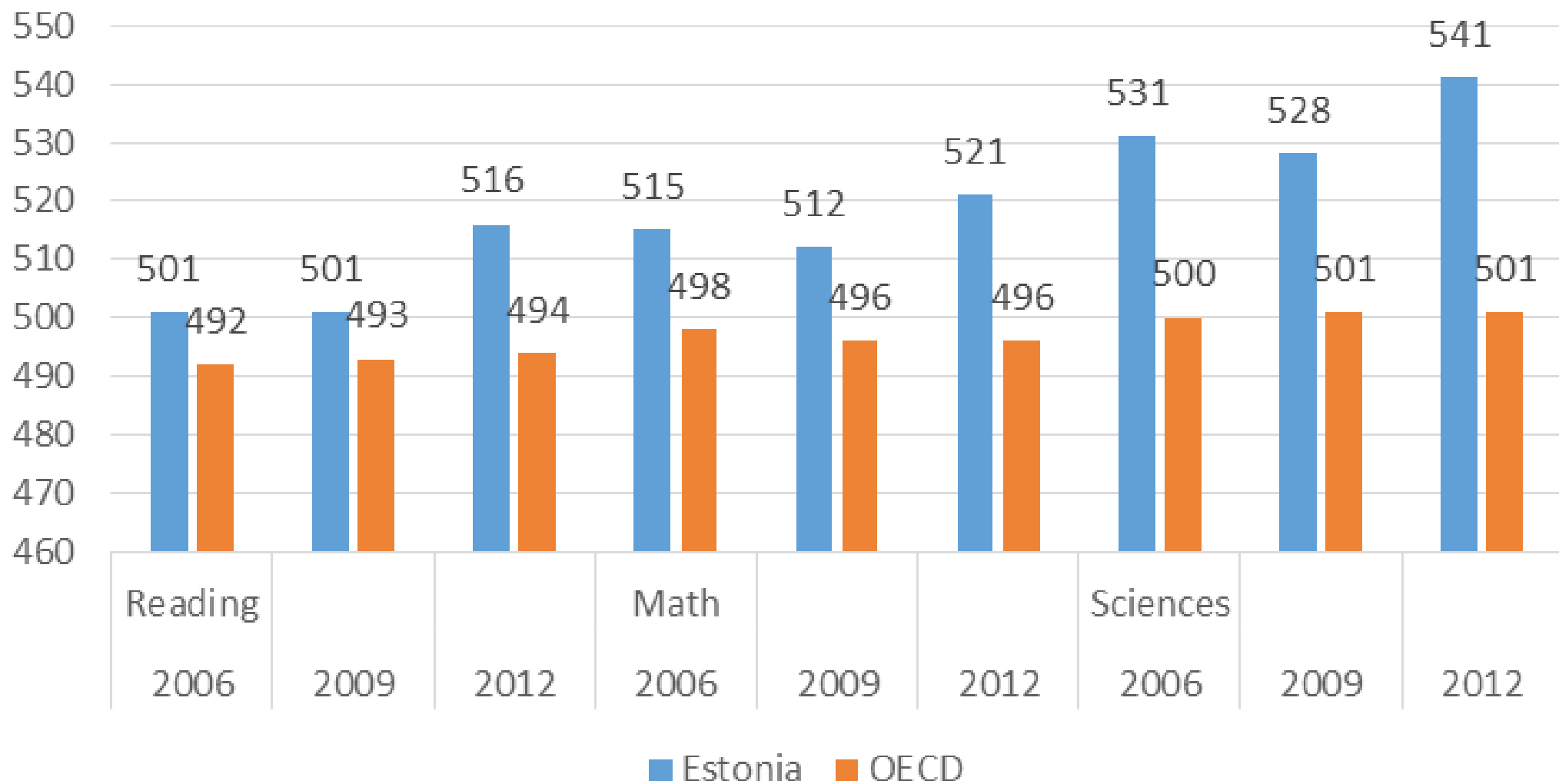
# PISA 2012 ranking

## Snapshot of performance in mathematics, reading and science

- Countries/economies with a mean performance/share of top performers above the OECD average  
Countries/economies with a share of low achievers below the OECD average
- Countries/economies with a mean performance/share of low achievers/share of top performers not statistically significantly different from the OECD average
- Countries/economies with a mean performance/share of top performers below the OECD average  
Countries/economies with a share of low achievers above the OECD average

	Mathematics				Reading		Science	
	Mean score in PISA 2012	Share of low achievers in mathematics (Below Level 2)	Share of top performers in mathematics (Level 5 or 6)	Annualised change in score points	Mean score in PISA 2012	Annualised change in score points	Mean score in PISA 2012	Annualised change in score points
OECD average	494	23.0	12.6	-0.3	496	0.3	501	0.5
Shanghai-China	613	3.8	55.4	4.2	570	4.6	580	1.8
Singapore	573	8.3	40.0	3.8	542	5.4	551	3.3
Hong Kong-China	561	8.5	33.7	1.3	545	2.3	555	2.1
Chinese Taipei	560	12.8	37.2	1.7	523	4.5	523	-1.5
Korea	554	9.1	30.9	1.1	536	0.9	538	2.6
Macao-China	538	10.8	24.3	1.0	509	0.8	521	1.6
Japan	536	11.1	23.7	0.4	538	1.5	547	2.6
Liechtenstein	535	14.1	24.8	0.3	516	1.3	525	0.4
Switzerland	531	12.4	21.4	0.6	509	1.0	515	0.6
Netherlands	523	14.8	19.3	-1.6	511	-0.1	522	-0.5
Estonia	521	10.5	14.6	0.9	516	2.4	541	1.5
Finland	519	12.3	15.3	-2.8	524	-1.7	545	-3.0
Canada	518	13.8	16.4	-1.4	523	-0.9	525	-1.5
Poland	518	14.4	16.7	2.6	518	2.8	526	4.6

## PISA OECD average and Estonia results



# Transition is finished, where do we go?

**Before**



**Now**





Digital



reading



# Future questions and implications

- Why some transition countries are doing well in education (Estonia, Poland) and some not ?
- What to learn from and how to support changes in transition countries?
- How to adopt to and support the environmental and global processes what influence education, literacy/reading?
- How we can catch up the digitalisation in teaching and education what is in delay comparing to everyday life?
- How to avoid/diminish the gap between digi-users and non-users (especially among socially disadvantaged children)?

<http://e-estonia.com/the-story/digital-society/education/>

Digiturn project to go over to digital learning within whole school  
(Samsung Electronics Baltics and Tallinn University)

<http://www.digipööre.ee/>

2014 – 8 school teams

2015 - + 12 school teams