

13. Financial and human resources for education

The pupil-teacher ratio in primary education varies widely across the region and in some countries is over 40.

According to UNESCO, one of the single most important determinants of the quality of education is daily interaction between teachers and students. This not only improves learning but also has positive effects on a child's overall development. UNESCO states that a ratio of over 40 students per teacher makes it difficult to attain a minimum quality standard.

Data on pupil-teacher ratios is so scarce that subregional aggregates can hardly be assessed. However, pupil-teacher ratios in primary education are patently highest in the countries of South and South-West Asia. The countries of North and Central Asia, on the other hand, register the lowest ratios in primary schooling, at about 20 students per teacher.

Afghanistan, at 65, has one of the highest ratios of students per teacher, not only in Asia and the Pacific but in the world. India had a ratio of 40 pupils per teacher in 2004, up from 35 in 1999. Although 2004 data is not available for Bangladesh, in 2000 it had a ratio of 57 students per teacher, while in Nepal by 2005 there were 40 pupils per teacher at the primary level.

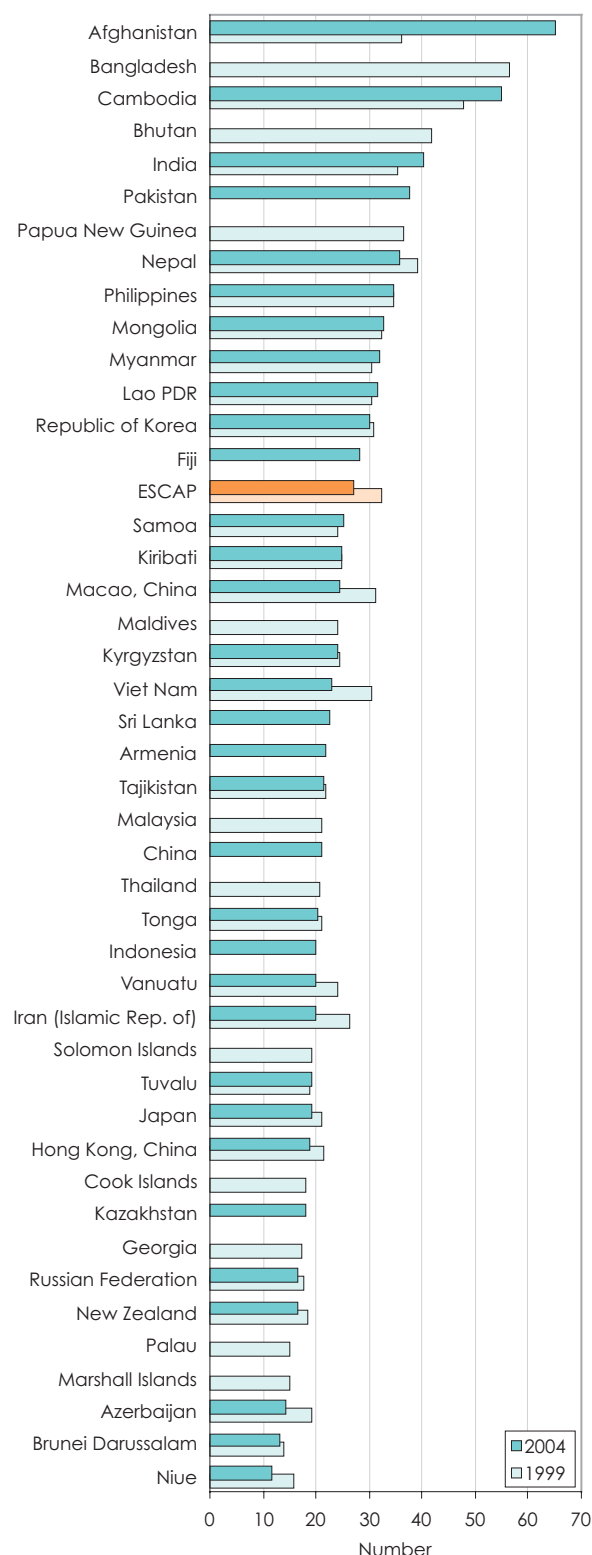
In South-East Asia, ratios in the Philippines, Myanmar and the Lao People's Democratic Republic surpass 30 students per teacher, but Cambodia had the second highest ratio in the Asian and the Pacific region, at 55 pupils per teacher in 2004.

Ratios of pupils per teacher at the secondary education level are lower than those for primary. In most countries/areas the ratio is below 20. The highest ratios are found in the Philippines, Pakistan, Myanmar, and India.

The vast majority of the financial resources for education, particularly in developing countries, is devoted to paying teachers' salaries. In some countries, those salaries represent over 75 per cent of public expenditure on education (UNESCO, 2006).

Small island developing States devote a considerable part of their public expenditure to education relative to the size of their economies. In the Marshall Islands, public education accounts for 11.8 per cent of the country's GDP – the highest level in Asia and the Pacific. Public expenditure

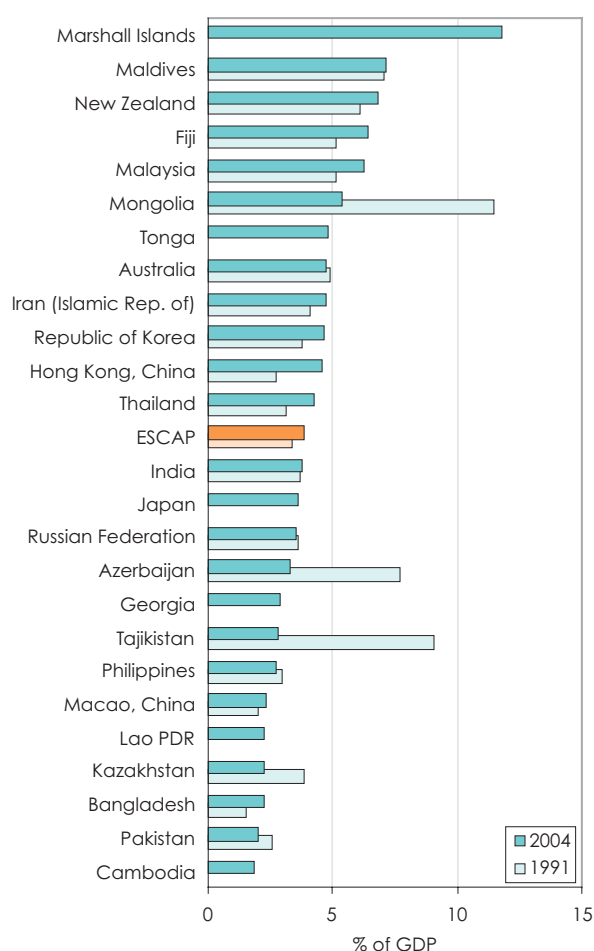
Figure 13.1 Pupil-teacher ratio in primary education in Asia and the Pacific, 1999 and 2004



on education in the Maldives and Fiji accounted for 7.2 and 6.4 per cent of their GDP in 2004.

In South and South-West Asia, where the largest investment needs to be made, spending on education remain particularly low in Bangladesh and Pakistan, just over 2 per cent of GDP.

Figure 13.2 Public expenditure on education as a percentage of GDP in Asia and the Pacific, 1991 and 2004



When expenditure on education is measured as a percentage of total government expenditure, the picture changes; it shows the importance that Governments attach to education relative to overall public spending.

In Thailand and Malaysia, government spending on education represented one quarter of total public spending in 2004. In both cases, this represents a substantial increase — by 7 percentage points — from 1991 levels. Hong Kong, China, registered a rise in education spending as a proportion of total public expenditure from 17.4 per cent in 1991 to 23.3 per cent by 2004.

Tajikistan and the Republic of Korea were the countries that experienced the largest decline in educational spending relative to overall public expenditure, decreasing from 24.4 and 25.6 per cent, respectively, at the beginning of the 1990s, to a little over 16 per cent by 2004.

Pupils-to-teacher in primary education (ratio): Average number of pupils per teacher in primary education in a given school year, based on head counts for both pupils and teachers. *Aggregates:* Averages are calculated as the sum of total primary enrolment divided by the sum of teaching staff. Missing data have been imputed. *Source:* Calculated by ESCAP using data from UNESCO Institute for Statistics, Data Centre, (online database, accessed in August 2007).

Pupils-to-teacher in secondary education (ratio): Average number of pupils per teacher in secondary education in a given school year, based on head counts for both pupils and teachers. *Aggregates:* Averages are calculated as the sum of total secondary enrolment divided by the sum of teaching staff. Missing data have been imputed. *Source:* Calculated by ESCAP using data from UNESCO Institute for Statistics, Data Centre, (online database, accessed in August 2007).

Public expenditure on education (% of GDP): Current and capital expenditures on education by national, regional, local governments including municipalities, expressed as a percentage of GDP. Household contributions are excluded. *Aggregates:* Averages are calculated using GDP in US dollars as weight. *Source:* UNESCO Institute for Statistics, Data Centre, (online database, accessed in August 2007).

Public expenditure on education (% of total government expenditure): Current and capital expenditures on education by national, regional, local governments including municipalities, expressed as a percentage of the total government expenditure. Household contributions are excluded. *Source:* UNESCO Institute for Statistics, Data Centre, (online database, accessed in August 2007).

Public expenditure per pupil in primary education (% of GDP per capita): Total public expenditure per pupil at the primary level, expressed as a percentage of GDP per capita. *Source:* UNESCO Institute for Statistics, Data Centre, (online database, accessed in August 2007).

Public expenditure per pupil in secondary education (% of GDP per capita): Total public expenditure per pupil at the secondary level, expressed as a percentage of GDP per capita. *Source:* UNESCO Institute for Statistics, Data Centre, (online database, accessed in August 2007).

Public expenditure per pupil in tertiary education (% of GDP per capita): Total public expenditure per student at the tertiary level, expressed as a percentage of GDP per capita. *Source:* UNESCO Institute for Statistics, Data Centre, (online database, accessed in August 2007).

13.1 Pupil-teacher ratio

	Pupils-to-teacher in primary education				Pupils-to-teacher in secondary education			
	Ratio				Ratio			
	1999	2000	2004	2005	1999	2000	2004	2005
East and North-East Asia								
China			21.1			14.5	16.2	
DPR Korea								
Hong Kong, China	21.6	21.3	18.8				17.2	
Macao, China	31.2	30.0	24.4		22.0	22.4	22.0	
Mongolia	32.4	32.6	32.9		17.8	19.1	21.3	
Republic of Korea	30.9	32.2	30.1	29.0	17.8	17.6	15.0	15.3
South-East Asia								
Brunei Darussalam	14.0	13.6	13.1		10.4	10.5	9.6	
Cambodia	47.8	50.1	55.1		17.1	18.0	24.5	
Indonesia		22.4	20.1			13.5	12.3	
Lao PDR	30.6	30.1	31.4		20.1	21.0	26.3	
Malaysia	21.3	19.6				17.3		
Myanmar	30.6	32.8	32.0	30.9	30.1	31.9	33.0	33.1
Philippines	34.7		34.5		34.1		37.5	
Singapore								
Thailand	20.6	20.8						
Timor-Leste								
Viet Nam	30.4	29.5	23.0		28.0	27.3	23.6	
South and South-West Asia								
Afghanistan	36.3	64.0	65.2					
Bangladesh	56.4	57.1			37.0	38.0		
Bhutan	41.7	41.1			32.2	32.5		
India	35.4	40.0	40.2		33.3	33.3	32.1	
Iran (Islamic Rep. of)	26.5	26.1	20.0		28.4	27.6	18.0	
Maldives	24.3	22.7			17.1	14.9		
Nepal	39.0	42.6	35.8	39.7	31.0	29.8		
Pakistan		33.0	37.5				36.2	
Sri Lanka			22.5					
Turkey								
North and Central Asia								
Armenia			21.8				9.8	
Azerbaijan	19.2	18.7	14.3		7.6	7.6	8.5	
Georgia	17.4	16.8			7.3	7.2		
Kazakhstan		18.7	17.9			10.8	10.8	
Kyrgyzstan	24.4	24.1	24.2		12.6	12.8	13.2	
Russian Federation	17.6		16.6				8.7	
Tajikistan	22.0	21.8	21.5		15.9	15.9	15.4	
Turkmenistan								
Uzbekistan								
Pacific								
American Samoa								
Cook Islands	18.0	17.8				13.9		
Fiji		28.1	28.2				21.8	
French Polynesia								
Guam								
Kiribati	24.7	31.7	24.7		19.6	17.6	18.6	
Marshall Islands	14.9				21.6			
Micronesia (F.S.)								
Nauru		21.5				17.4		
New Caledonia								
Niue	15.8	14.7	11.5		10.7	11.8	8.4	
Northern Mariana Is.								
Palau	15.0	15.7			12.9	15.1		
Papua New Guinea	36.5	35.9			18.9	18.8		
Samoa	24.0	24.0	25.0		19.9	21.2	20.8	
Solomon Islands	19.2				12.7	10.1		
Tonga	20.9	22.1	20.3		13.7	13.7		
Tuvalu	18.9	19.7	19.2					
Vanuatu	24.2	22.5	20.0		20.7	20.3		
ESCAP Developed Economies								
Australia								
Japan	21.0	20.7	19.2		12.4	12.2	11.2	
New Zealand	18.3	18.4	16.4		0.0	0.0	11.4	
ESCAP			27.5			19.1	19.1	
LLDC	28.5	29.9	33.4					
LDC								
SIDS					18.7	18.2		
ASEAN	25.9	25.8				19.5	18.3	
SAARC	36.9	40.8			33.7	33.8		
Central Asia								
Low-income	36.6	40.2	40.9					
Middle-income	20.6	20.6	21.2		14.1	14.7		
High-income							12.3	
Africa	36.7	37.2						
Latin America & Carib.					17.2	17.3		
North America								
Europe		14.3	13.8					
Other Asia-Pacific		17.7			12.7			
World								

13.2 Financial resources for education

	Public expenditure on education				Public expenditure on education			
	% of GDP				% of total government expenditure			
	1991	2000	2004	2005	1991	2000	2004	2005
East and North-East Asia								
China	2.2				12.7			
DPR Korea								
Hong Kong, China	2.8		4.6	4.2	17.4		23.3	23.0
Macao, China	2.0	3.6	2.3		10.4	13.9	14.0	
Mongolia	11.5	6.7	5.3		22.7			
Republic of Korea	3.8		4.6		25.6		16.5	
South-East Asia								
Brunei Darussalam	3.5					9.1		
Cambodia		1.7	1.9			14.6		
Indonesia	1.0	1.4						
Lao PDR		1.5	2.3	2.3		7.4	10.8	11.7
Malaysia	5.1	6.2	6.2		18.0	26.7	25.2	
Myanmar		0.6				8.7		
Philippines	3.0	3.5	2.7		10.5	13.9	16.4	
Singapore	3.1				18.2			
Thailand	3.1	5.4	4.2	4.2	20.0	31.0	26.8	25.0
Timor-Leste								
Viet Nam	1.8				9.7			
South and South-West Asia								
Afghanistan								
Bangladesh	1.5	2.5	2.2	2.5	10.3	15.0	14.8	14.2
Bhutan		5.6				13.8		
India	3.7	4.4	3.8		12.2	12.7		
Iran (Islamic Rep. of)	4.1	4.3	4.7	4.7	22.4	18.3	17.9	22.8
Maldives	7.0		7.2	7.1	16.0			15.0
Nepal	2.0	3.0			8.5	13.2		
Pakistan	2.6	1.8	2.0	2.3	7.4		6.4	10.9
Sri Lanka	3.2				8.4			
Turkey	2.4	3.5						
North and Central Asia								
Armenia		3.2						
Azerbaijan	7.7	3.9	3.3	2.5	24.7	23.8		19.6
Georgia		2.2	2.9			11.7	13.1	
Kazakhstan	3.9	3.3	2.3	2.3	19.1	12.1		
Kyrgyzstan	6.0	2.9			22.7			
Russian Federation	3.6	2.9	3.6			10.6	12.9	
Tajikistan	9.1	2.3	2.8	3.5	24.4		16.9	18.0
Turkmenistan	3.9				19.7			
Uzbekistan	9.4				17.8			
Pacific								
American Samoa								
Cook Islands		0.2						
Fiji	5.1	6.0	6.4			22.8		
French Polynesia								
Guam								
Kiribati		15.3						
Marshall Islands		14.5	11.8					
Micronesia (F.S.)		7.3						
Nauru								
New Caledonia								
Niue								
Northern Mariana Is.								
Palau		9.8						
Papua New Guinea								
Samoa		4.0				13.3		
Solomon Islands	3.8				7.9			
Tonga		6.0	4.8			16.5		
Tuvalu								
Vanuatu	4.6	7.8			18.8	16.9		
ESCAP Developed Economies								
Australia	4.9	4.8	4.7		14.8	13.3		
Japan		3.6	3.6			10.5	9.8	
New Zealand	6.1		6.8	6.5				
ESCAP		3.7	3.9					
LLDC	6.0							
LDC	1.6	2.3	2.3					
SIDS								
ASEAN	2.5	3.7						
SAARC	3.3	3.9	3.4					
Central Asia	6.1							
Low-income	3.5	3.8	3.4					
Middle-income	2.9							
High-income		3.7	3.9					
Africa	4.5							
Latin America & Carib.		4.5	4.7					
North America	5.2		5.9					
Europe	4.8	5.0	5.3					
Other Asia-Pacific								
World								

13.3 Public expenditure on education

	Public expenditure per pupil in primary education % of GDP per capita				Public expenditure per pupil in secondary education % of GDP per capita				Public expenditure per pupil in tertiary education % of GDP per capita			
	1999	2000	2004	2005	1999	2000	2004	2005	1999	2000	2004	2005
East and North-East Asia												
China					11.5				90.1			
DPR Korea												
Hong Kong, China			15.3	14.9			21.0	19.9			68.5	60.6
Macao, China		8.4				11.3			59.4	61.0		
Mongolia			14.3				13.2				22.8	
Republic of Korea	18.4		19.2		15.7		25.0		8.4		9.0	
South-East Asia												
Brunei Darussalam												
Cambodia		5.9	6.1								77.5	
Indonesia		3.7				7.3				21.3		
Lao PDR	2.2	3.9		9.7	4.3	5.6		4.9	66.9	69.0		26.8
Malaysia		12.8	14.6			22.3	21.1			83.3	71.1	
Myanmar												
Philippines		12.5	9.2			10.7	9.0			15.0	12.4	
Singapore												
Thailand		17.6	14.0				15.5			35.5	23.0	24.9
Timor-Leste												
Viet Nam												
South and South-West Asia												
Afghanistan												
Bangladesh	7.3	8.2	7.0	7.7	12.4	11.4	13.5	14.7	46.3	43.5	43.2	49.7
Bhutan		14.4				103.2				574.0		
India	10.6	14.5	9.4		21.2	24.3	16.8		74.5	90.5	94.7	
Iran (Islamic Rep. of)			10.0	9.7			10.9	11.0			25.1	22.8
Maldives			19.6	22.0			17.2					
Nepal	9.1	10.3			13.1	11.6				141.7		
Pakistan												
Sri Lanka												
Turkey		11.2								45.5		
North and Central Asia												
Armenia										29.1		
Azerbaijan	6.9	7.6		6.3	17.0	18.2		10.2	19.1	15.9		10.4
Georgia												
Kazakhstan			9.6	10.0			7.5	7.9			6.0	5.7
Kyrgyzstan	6.2	5.3			11.9	9.9			27.7	16.7		
Russian Federation											10.8	
Tajikistan			6.7	8.7			9.2	11.3			8.8	14.1
Turkmenistan												
Uzbekistan												
Pacific												
American Samoa												
Cook Islands	1.0	0.9			1.2	1.0						
Fiji			18.6				17.2				67.1	
French Polynesia												
Guam												
Kiribati	37.1	37.3										
Marshall Islands	71.7				28.0							
Micronesia (F.S.)												
Nauru												
New Caledonia												
Niue												
Northern Mariana Is.												
Palau												
Papua New Guinea												
Samoa	9.1	8.2			10.0	9.6			212.8	137.5		
Solomon Islands												
Tonga			12.2				9.4				159.0	
Tuvalu												
Vanuatu	12.4	15.3			79.2	70.6			130.2	167.9		
ESCAP Developed Economies												
Australia	16.4	16.4	16.4		15.0	14.2	15.0		26.5	25.9	23.2	
Japan	20.7	21.2	22.4		20.5	20.8	22.3		14.8	17.4	20.5	
New Zealand	20.3	20.4	19.4	19.2	24.5	23.3	22.7	22.4	42.0		34.1	25.1
ESCAP												
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