# INDICATOR B6

# EXPENDITURE IN INSTITUTIONS BY SERVICE CATEGORY AND BY RESOURCE CATEGORY

This indicator compares OECD countries with respect to the division of spending between current and capital expenditure, and the distribution of current expenditure by resource category. This indicator is largely influenced by teacher salaries (see Indicator D3), pension systems, teacher age distribution, size of the non-teaching staff employed in education (see Indicator D2 in Education at a Glance 2005) and the degree to which expansion in enrolments requires the construction of new buildings. It also compares how OECD countries' spending is distributed by different functions of educational institutions.

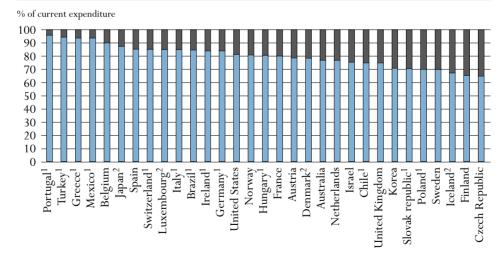
# Key results

### Chart B6.1. Distribution of current expenditure on educational institutions for primary, secondary and post-secondary non-tertiary education (2003)

The chart shows the distribution of current spending on educational institutions by resource category. Spending on education can be broken down into capital and current expenditure. Within current expenditure, one can distinguish resource categories compared to other items and service categories such as spending on instruction compared to ancillary and R&D services. The biggest item in current spending, teacher compensation, is examined further in Indicator D3.

■ Compensation of all staff
■ Other current expenditure

In primary, secondary and post-secondary non-tertiary education combined, current expenditure accounts for an average of 92% of total spending across OECD countries. In all but three OECD and partner countries, 70% or more of primary, secondary and post-secondary non-tertiary current expenditure is spent on staff salaries.



- 1. Public institutions only.
- 2. Post-secondary non-tertiary included in both upper secondary and tertiary education. Countries are ranked in descending order of the share of compensation of all staff on primary, secondary and postsecondary non-tertiary education.

Source: OECD. Table B6.2. See Annex 3 for notes (www.oecd.org/edu/eag2006).

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# Other highlights of this indicator

- OECD countries spend an average of 35% of current expenditure at the tertiary level on purposes other than the compensation of educational personnel. This is explained by the higher cost of facilities and equipment in higher education.
- On average, OECD countries spend 0.2% of their GDP on subsidies for ancillary services provided by primary, secondary and post-secondary non-tertiary institutions. This represents 5% of total spending. At the high end, Finland, France, Korea, the Slovak Republic and Sweden allocate about 10% or more of total spending on educational institutions in percentage of GDP on ancillary services.
- A distinctive feature of tertiary institutions is high spending on R&D, which on average comprises over one-quarter of spending at this level. The fact that some countries spend much more on this item than others helps explain the wide differences in overall tertiary spending. Significant differences among OECD countries in the emphasis on R&D in tertiary institutions also contribute to the observed variation.
- The payment of instructional staff is not as great a share of spending in tertiary institutions as at other levels, because of the higher cost of facilities and equipment.

INDICATOR B6

# **Policy context**

How spending is apportioned between different categories of expenditure can affect the quality of services (e.g. teachers' salaries), the condition of educational facilities (e.g. school maintenance) and the ability of the education system to adjust to changing demographic and enrolment trends (e.g. the construction of new schools).

Comparisons of how different OECD countries apportion educational expenditure among the various resource categories can also provide some insight into variation in the organisation and operation of educational institutions. Decisions on the allocation of resources made at the system level – both budgetary and structural – eventually feed through to the classroom and affect the nature of instruction and the conditions under which it is provided.

This indicator also compares how spending is distributed by different functions of educational institutions. Educational institutions offer a range of educational services in addition to instruction. At the primary, secondary and post-secondary non-tertiary levels, institutions may offer meals, and free transport to and from school or boarding facilities. At the tertiary level, institutions may offer housing and often perform a wide range of research activities as an integral part of tertiary education.

### **Evidence and explanations**

### What this indicator does and does not cover

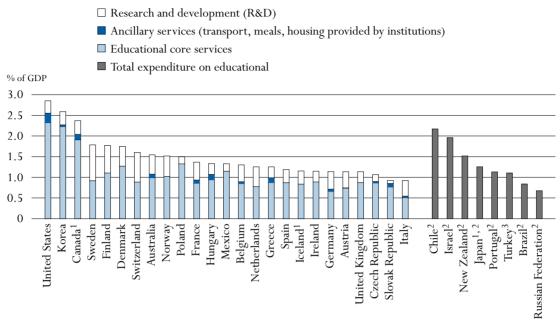
This indicator breaks down educational expenditure by current and capital expenditure and the three main functions typically fulfilled by educational institutions. This includes costs directly attributable to instruction, such as teachers' salaries or school materials, and costs indirectly related to the provision of instruction, such as expenditure on administration, instructional support services, development of teachers, student counselling, or the construction and/or provision of school facilities. It also includes spending on ancillary services such as student welfare services provided by educational institutions. Finally, it includes spending attributable to research and development (R&D) performed at tertiary institutions, either in the form of separately funded R&D activities or in the form of those proportions of salaries and current expenditure in general education budgets that are attributable to the research activities of staff.

The indicator does not include public and private R&D spending outside educational institutions, such as R&D spending in industry. A comparative review of R&D spending in sectors other than education is provided in the OECD Science and Technology Indicators. Expenditure on student welfare services at educational institutions only includes public subsidies for those services. Expenditure by students and their families on services that are provided by institutions on a selffunding basis is not included.

### Expenditure on instruction, R&D and ancillary services

Below the tertiary level, educational expenditure is dominated by spending on educational core services. At the tertiary level, other services – particularly those related to R&D activities – can account for a significant proportion of educational spending. Variation among OECD countries in expenditure on R&D activities can therefore explain a significant part of the differences in overall educational expenditure per tertiary student (Chart B6.2). High levels of R&D spending in tertiary educational institutions in Australia, Belgium, Denmark, Finland, France, Germany,

Chart B6.2. Expenditure on educational core services, R&D and ancillary services in tertiary educational institutions as a percentage of GDP (2003)



- 1. Post-secondary non-tertiary included in both upper secondary and tertiary education.
- 2. Total expenditure at tertiary level including research and development (R&D) expenditure.
- 3. Total expenditure at tertiary level excluding research and development (R&D) expenditure. Countries are ranked in descending order of total expenditure on educational institutions in tertiary institutions. Source: OECD. Table B6.1. See Annex 3 for notes (www.oecd.org/edu/eag2006).

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the Netherlands, Norway, Sweden and Switzerland (between 0.4 and 0.9% of GDP), for example, imply that spending on education per student in these OECD countries would be considerably lower if the R&D component were excluded (see Table B1.1c).

### Student welfare services

Student welfare services (as well as services for the general public in some cases) are integral functions of schools and universities in many OECD countries. Countries finance these ancillary services with different combinations of public expenditure, public subsidies and fees paid by students and their families.

On average, OECD countries spend 0.2% of their GDP on subsidies for ancillary services provided by primary, secondary and post-secondary non-tertiary institutions. This represents 5% of total spending on these institutions. At the high end, Finland, France, Korea, the Slovak Republic and Sweden spend about 10% or more of total spending on educational institutions in percentage of GDP on ancillary services (Table B6.1).

In more than two-thirds of OECD countries, the amount spent on ancillary services is higher than the amount spent on subsidies to households at the primary, secondary and post-secondary non-tertiary levels. Exceptions to this pattern are Denmark, Finland, Hungary, Korea, the Netherlands, New Zealand, Sweden and Turkey, where expenditure on subsidies to households is higher (Tables B5.3 and B6.1).

**B**6

At the tertiary level, ancillary services are more often provided on a self-financed basis. On average, expenditure on subsidies for ancillary services at the tertiary level amounts to less than 0.1% of GDP and represents up to 0.23% in the United States (Tables B6.1).

# Current and capital expenditures, and the distribution of current expenditure by resource category

Educational expenditure can first be divided into current and capital expenditure. Capital expenditure comprises spending on assets that last longer than one year and includes spending on the construction, renovation and major repair of buildings. Current expenditure comprises spending on school resources used each year for the operation of schools.

Current expenditure can be further sub-divided into three broad functional categories, which are the compensation of teachers, the compensation of other staff, and other current expenditures (e.g. teaching materials and supplies, maintenance of school buildings, preparation of student meals and renting of school facilities). The amount allocated to each of these functional categories will depend in part on current and projected changes in enrolment, on the salaries of educational personnel and on costs of maintenance and construction of educational facilities.

Education takes place mostly in school and university settings. The labour-intensive technology of education explains the large proportion of current spending within total educational expenditure. In primary, secondary, and post-secondary non-tertiary education combined, current expenditure accounts for nearly 92% of total spending on average across all OECD countries.

There is some noticeable variation among OECD countries with respect to the relative proportions of current and capital expenditure: at the primary, secondary and post-secondary non-tertiary levels combined, the proportion of current expenditure ranges from less than 85% in Korea and Luxembourg and the partner country Chile to 97% or more in Austria, Belgium, Canada, Mexico and Portugal (Chart B6.3).

The salaries of teachers and other staff employed in education account for the largest proportion of current expenditure in all OECD countries. On average across the OECD countries, expenditure on the compensation of educational personnel accounts for 80% of current expenditure at the primary, secondary and post-secondary non-tertiary levels of education combined. In all except three OECD countries – the Czech Republic, Finland and Iceland – 70% or more of current expenditure at the primary, secondary and post-secondary non-tertiary levels is spent on staff salaries. The proportion devoted to the compensation of educational personnel is 90% or more in Greece, Mexico, Portugal and Turkey (Chart B6.1).

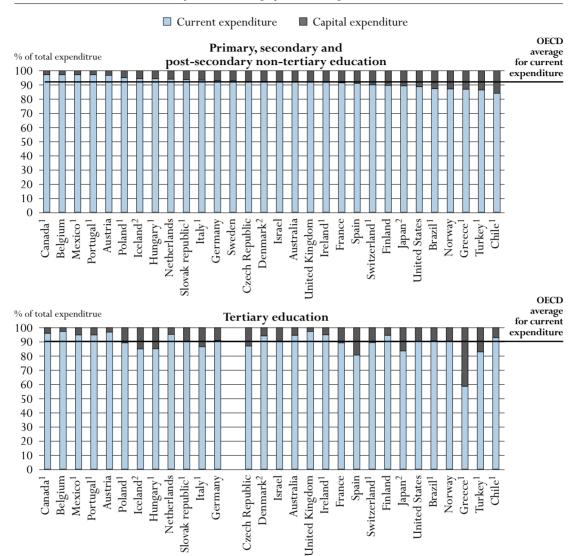
OECD countries with relatively small education budgets (e.g. Mexico, Portugal and Turkey) tend to devote a larger proportion of current educational expenditure to the compensation of personnel and a smaller proportion to services that are sub-contracted, such as support services (e.g. maintenance of school buildings), ancillary services (e.g. preparation of meals for students), and renting of school buildings and other facilities.

# Proportions of current expenditure allocated to the compensation of teachers and other staff

In Denmark, France and the United States, around one-quarter of current expenditure in primary, secondary and post-secondary non-tertiary education combined goes towards compensation of non-teaching staff, while in Austria, Ireland and Korea this figure is 10% or less. These differences

Chart B6.3. Distribution of current and capital expenditure on educational institutions (2003)

By resource category and level of education



- 1. Public institutions only.
- 2. Post-secondary non-tertiary included in both upper secondary and tertiary education.

Countries are ranked in descending order of the share of current expenditure on primary, secondary and post-secondary non-tertiary education.

Source: OECD. Table B6.2. See Annex 3 for notes (www.oecd.org/edu/eag2006).

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are likely to reflect the degree to which educational personnel such as principals, guidance counsellors, bus drivers, school nurses, janitors and maintenance workers specialise in non-teaching activities (Table B6.2).

At the tertiary level, the proportion of total expenditure spent on capital outlays is larger than at the primary, secondary and post-secondary non-tertiary levels, generally because of more differentiated and advanced teaching facilities. In 13 out of the 30 OECD and partner countries

for which data are available, the proportion spent on capital expenditure at the tertiary level is 10% or more, and in Greece, Spain and Turkey it is above 17% (Chart B6.3).

Differences are likely to reflect how tertiary education is organised in each OECD country, as well as the degree to which expansion in enrolments requires the construction of new buildings.

OECD countries, on average, spend 35% of current expenditure at the tertiary level on purposes other than the compensation of educational personnel. This is explained by the higher cost of facilities and equipment in higher education (Table B6.2).

# **Definitions and methodologies**

Data refer to the financial year 2003 and are based on the UOE data collection on education statistics administered by the OECD in 2005 (for details see Annex 3 at www.oecd.org/edu/eag2006).

The distinction between current and capital expenditure is taken from the standard definition used in national income accounting. Current expenditure refers to goods and services consumed within the current year, and requiring recurrent production in order to sustain the provision of educational services. Capital expenditure refers to assets which last longer than one year, including spending on construction, renovation or major repair of buildings and new or replacement equipment. The capital expenditure reported here represents the value of educational capital acquired or created during the year in question - that is, the amount of capital formation regardless of whether the capital expenditure was financed from current revenue or by borrowing. Neither current nor capital expenditure includes debt servicing.

Calculations cover expenditure by public institutions or, where available, that of public and private institutions combined.

Current expenditure other than on the compensation of personnel includes expenditure on services which are sub-contracted, such as support services (e.g. maintenance of school buildings), ancillary services (e.g. preparation of meals for students) and renting of school buildings and other facilities. These services are obtained from outside providers, unlike the services provided by the education authorities or by the educational institutions themselves using their own personnel.

Expenditure on R&D includes all expenditure on research performed at universities and other tertiary education institutions, regardless of whether the research is financed from general institutional funds or through separate grants or contracts from public or private sponsors. The classification of expenditure is based on data collected from the institutions carrying out R&D rather than on the sources of funds.

Ancillary services are services provided by educational institutions that are peripheral to the main educational mission. The two main components of ancillary services are student welfare services and services for the general public. At primary, secondary, and post-secondary non-tertiary levels, student welfare services include meals, school health services, and transportation to and from school. At the tertiary level, it includes residence halls (dormitories), dining halls, and health care. Services for the general public include museums, radio and television broadcasting, sports and recreational and cultural programmes. Expenditure on ancillary services, including fees from students or households, is excluded.

Educational core services are estimated as the residual of all expenditure, i.e. total expenditure on educational institutions net of expenditure on R&D and ancillary services.

Note that data appearing in earlier editions of this publication may not always be comparable to data shown in the 2006 edition due to changes in definitions and coverage that were made as a result of the OECD expenditure comparability study (see Annex 3 at www.oecd.org/edu/eag2006 for details on changes).

**B**6

Table B6.1. Expenditure on institutions by service category as a percentage of GDP (2003)

Expenditure on instruction, R&D and ancillary services in educational institutions and private expenditure on educational goods purchased outside educational institutions

		Primary	y, secondary non-tertiar	and pos y educa	t-secondary tion	Tertiary education					
			penditure oi ional institu		, onal	e	Expenditure on educational institutions				
		Core educational services	Ancillary services (transport, meals, housing provided by institutions)	Total	Private payments on instructional services/ goods outside educational institutions	Core educational services	Ancillary services (transport, meals, housing provided by institutions)	Research & development at tertiary institutions	Total	Private payments on instructional services/ goods outside educational institutions	
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
ies	Australia	3.93	0.18	4.11	0.11	0.99	0.09	0.47	1.55	0.14	
ıntr	Austria	3.66	0.18	3.83	m	0.74	0.01	0.39	1.14	m	
COL	Belgium	3.95	0.15	4.10	0.12	0.85	0.05	0.41	1.30	0.11	
OECD countries	Canada <sup>1, 2</sup>	3.38	0.18	3.55	m	1.91	0.13	0.33	2.37	0.13	
0	Czech Republic	2.95	0.13	3.08	0.10	0.87	0.04	0.17	1.07	0.06	
	Denmark <sup>1</sup>	x(3)	x(3)	4.25	0.69	1.27	a	0.48	1.75	0.80	
	Finland	3.55	0.42	3.98	m	1.11	n	0.67	1.77	m	
	France	3.68	0.53	4.21	0.20	0.86	0.08	0.43	1.37	0.08	
	Germany	3.46	0.08	3.54	0.19	0.66	0.06	0.42	1.14	0.04	
	Greece	2.77	0.04	2.81	0.86	0.84	0.12	0.30	1.25	0.06	
	Hungary	3.35	0.35	3.70	m	0.94	0.13	0.26	1.34	m	
	Iceland <sup>1</sup>	x(3)	x(3)	5.19	m	0.84	x(8)	0.32	1.16	m	
	Ireland <sup>3</sup>	3.14	0.07	3.22	m	0.89	x(8)	0.26	1.15	m	
	Italy	3.52	0.12	3.65	0.43	0.51	0.03	0.38	0.93	0.14	
	Japan <sup>1</sup>	x(3)	x(3)	2.97	0.78	x(8)	x(8)	x(8)	1.26	0.04	
	Korea	3.98	0.42	4.40	m	2.23	0.04	0.32	2.59	m	
	Luxembourg	x(3)	x(3)	3.97	m	m	m	m	m	m	
	Mexico <sup>3</sup>	4.49	m	4.49	0.25	1.15	m	0.18	1.33	0.06	
	Netherlands	3.32	0.05	3.36	0.19	0.78	n	0.48	1.26	0.06	
	New Zealand	x(3)	x(3)	4.92	0.01	x(8)	x(8)	x(8)	1.52	n o.oo	
	Norway	x(3)	x(3)	4.56	m	1.03	n	0.49	1.52	m	
	Poland	4.35	0.01	4.36	0.21	1.33	n	0.17	1.50	0.06	
	Portugal	4.13	0.03	4.16	0.06	x(8)	x(8)	x(8)	1.13	0.03	
	Slovak Republic <sup>1</sup>	2.59	0.48	3.06	0.87	0.77	0.09	0.08	0.93	0.23	
	Spain	2.88	0.11	2.99	m	0.87	m	0.32	1.19	m	
	Sweden	4.07	0.44	4.51	m	0.92	n	0.87	1.79	m	
	Switzerland	x(3)	x(3)	4.62	m	0.89	x(8)	0.72	1.60	m	
	Turkey <sup>3</sup>	2.50	0.10	2.60	m	x(8)	x(8)	x(8)	1.11	m	
	United Kingdom	4.32	0.26	4.58	m	0.88	m	0.26	1.14	0.20	
	United States	3.89	0.30	4.20	a	2.32	0.23	0.30	2.85	a a	
	OECD average	3.56	0.21	3.90	0.32	1.06	0.06	0.38	1.45	0.12	
r s	U										
Partnuntri	Brazil <sup>2</sup>	x(3)	x(3)	3.36	m	x(8)	x(8)	x(8)	0.84	m	
	Chile <sup>4</sup>	3.96	0.16	4.12	0.03	x(8)	x(8)	x(8)	2.17	0.01	
	Israel	x(3)	x(3)	4.79	0.28	x(8)	x(8)	x(8)	1.96	n	
	Russian Federation	x(3)	x(3)	2.07	m	x(8)	x(8)	x(8)	0.68	m	

<sup>1.</sup> Some levels of education are included with others. Refer to "x" code in Table B1.1a for details.

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<sup>2.</sup> Year of reference 2002.

<sup>3.</sup> Research and development expenditure and thus total expenditure is underestimated.

<sup>4.</sup> Year of reference 2004.

Source: OECD. See Annex 3 for notes (www.oecd.org/edu/eag2006).

 $<sup>{\</sup>it Please \ refer \ to \ the \ Reader's \ Guide \ for \ information \ concerning \ the \ symbols \ replacing \ missing \ data}.$ 

Table B6.2. Expenditure on educational institutions by resource category and level of education (2003) Distribution of total and current expenditure on educational institutions from public and private sources

		Primary, secondary and post-secondary non-tertiary education				Tertiary education							
		of t	ntage otal diture	Pei	Percentage of current expenditure			of t	ntage otal diture	Percentage of current expenditure			
		Current	Capital	Compensation of teachers	Compensation of other staff	Compensation of all staff	Other current	Current	Capital	Compensation of teachers	Compensation of other staff	Compensation of all staff	Other current
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
ies	Australia	92.1	7.9	60.0	16.9	76.8	23.2	94.7	5.3	31.8	27.8	59.6	40.4
OECD countries	Austria	96.8	3.2	68.5	9.9	78.6	21.4	96.9	3.1	41.5	15.6	57.1	42.9
95 Q	Belgium	97.2	2.8	71.2	18.7	89.9	10.1	97.3	2.7	55.3	15.1	70.4	29.6
)EC	Canada <sup>1, 2</sup>	97.3	2.7	61.2	15.1	76.3	23.7	96.2	3.8	33.1	34.2	67.3	32.7
_	Czech Republic	92.5	7.5	48.7	16.1	64.8	35.2	87.0	13.0	25.7	25.9	51.6	48.4
	Denmark <sup>3</sup>	92.4	7.6	51.9	26.6	78.4	21.6	94.2	5.8	52.0	25.4	77.4	22.6
	Finland	89.6	10.4	53.9	11.4	65.3	34.7	94.7	5.3	35.2	28.0	63.2	36.8
	France	91.5	8.5	57.0	23.1	80.1	19.9	89.3	10.7	51.7	28.4	80.1	19.9
	Germany	93.0	7.0	x(5)	x(5)	83.9	16.1	90.9	9.1	x(11)	x(11)	71.4	28.6
	Greece	87.1	12.9	x(5)	x(5)	93.7	6.3	59.2	40.8	x(11)	x(11)	52.2	47.8
	Hungary <sup>2</sup>	94.4	5.6	x(5)	x(5)	80.5	19.5	85.2	14.8	x(11)	x(11)	69.6	30.4
	Iceland	94.5	5.5	x(5)	x(5)	67.1	32.9	85.0	15.0	x(11)	x(11)	76.8	23.2
	Ireland <sup>2</sup>	91.9	8.1	75.8	8.2	84.0	16.0	95.1	4.9	46.8	23.9	70.8	29.2
	Italy <sup>2</sup>	93.5	6.5	66.2	18.7	84.8	15.2	86.7	13.3	40.4	19.8	60.2	39.8
	Japan <sup>3</sup>	89.4	10.6	x(5)	x(5)	87.4	12.6	83.6	16.4	x(11)	x(11)	64.5	35.5
	Korea	81.1	18.9	62.9	7.9	70.8	29.2	90.5	9.5	30.5	12.8	43.3	56.7
	Luxembourg <sup>2</sup>	81.5	18.5	72.8	12.2	85.0	15.0	m	m	m	m	m	m
	Mexico <sup>2</sup>	97.2	2.8	81.7	11.9	93.6	6.4	94.8	5.2	59.0	18.3	77.3	22.7
	Netherlands	94.2	5.8	x(5)	x(5)	76.7	23.3	95.2	4.8	x(11)	x(11)	74.6	25.4
	New Zealand	m	m	m	m	m	m	m	m	m	m	m	m
	Norway	87.3	12.8	x(5)	x(5)	80.8	19.2	90.5	9.5	x(11)	x(11)	62.8	37.2
	$Poland^2$	95.0	5.0	x(5)	x(5)	70.0	30.0	89.2	10.8	x(11)	x(11)	58.2	41.8
	Portugal <sup>2</sup>	97.1	2.9	80.6	15.1	95.7	4.3	94.9	5.1	x(11)	x(11)	72.8	27.2
	Slovak Republic	93.8	6.2	53.9	16.5	70.4	29.6	89.9	10.1	28.6	19.3	47.9	52.1
	Spain	91.1	8.9	74.6	10.6	85.2	14.8	80.6	19.4	58.5	20.5	79.0	21.0
	Sweden	92.8	7.2	50.9	19.0	69.8	30.2	m	m	x(11)	x(11)	59.7	40.3
	Switzerland <sup>2</sup>	90.0	10.0	72.2	12.8	85.0	15.0	89.6	10.4	53.6	24.9	78.4	21.6
	Turkey <sup>2</sup>	86.5	13.5	x(5)	x(5)	94.3	5.7	82.9	17.1	73.5	m	73.5	26.5
	United Kingdom	91.9	8.1	53.0	21.8	74.8	25.2	97.2	2.8	32.4	25.9	58.3	41.7
	<b>United States</b>	88.8	11.2	55.4	25.7	81.1	18.9	90.4	9.6	24.2	31.3	55.5	44.5
	OECD average	91.8	8.2	63.6	15.9	80.2	19.8	89.7	10.3	43.0	23.4	65.5	34.5
ies	Brazil <sup>1</sup>	87.3	12.7	x(5)	x(5)	84.6	15.4	90.6	9.4	x(11)	x(11)	73.6	26.4
Partner countries	Chile <sup>2,4</sup>	84.1	15.9	x(5)	x(5)	74.9	25.1	93.1	6.9	x(11)	x(11)	65.0	35.0
Con	Israel	92.1	7.9	x(5)	x(5)	75.4	24.6	89.9	10.1	x(11)	x(11)	73.6	26.4
	Russian Federation	m	m	m	m	75. <del>T</del> m	27.0 m	m	m	m m	m m	75.0 m	20.7 m

<sup>1.</sup> Year of reference 2002.

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.

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<sup>2.</sup> Public institutions only.

<sup>3</sup>. Some levels of education are included with others. Refer to "x" code in Table B1.1a for details.

<sup>4.</sup> Year of reference 2004.

Source: OECD. See Annex 3 for notes (www.oecd.org/edu/eag2006).

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# TABLE OF CONTENTS

		Name of the indicato in the 2005 edition
Foreword	3	
Editorial		
Introduction.		
Reader's Guid	le	
CHAPTER A	THE OUTPUT OF EDUCATIONAL INSTITUTIONS AND THE IMPACT OF LEARNING27	
Table A1.1a Table A1.2a Table A1.3a Table A1.4	Educational attainment of the adult population	A1
Table A2.1 Table A2.2	Current upper secondary graduation rates42Upper secondary graduation rates (2004)48Post-secondary non-tertiary graduation rates (2004)49	A2
Table A3.1 Table A3.2	Current tertiary graduation and survival rates50Tertiary graduation rates (2000, 2004)58Survival rates in tertiary education (2004)59	A3
Table A4.1	What 15-year-olds can do in mathematics 60 Percentage of students at each level of proficiency on the OECD PISA mathematics scale (2003) 70 Mean student performance and variation on different aspects of the OECD PISA mathematics scale (2003) 71 Mean score and variation in student performance on the OECD PISA mathematics scale (2003) 72	A4
Table A5.1	Between- and within-school variation in the mathematics performance of 15-year-olds	<b>A</b> 6
Table A6.1	Fifteen-year-old students who perform at the lowest levels of proficiency in mathematics (2003)	

		Name of the indicator in the 2005 edition
Table A6.2	Reading performance of lowest mathematics	
	performers (2003)	
Table A6.3	Mathematics performance of lowest reading	
	performers (2003)	
Indicator A7	Institutional differentiation, socio-economic status and	
	15-year-old students' mathematics performance (2003)94	
Table A7.1	Institutional differentiation, variance in mathematics	
	performance, and economic, social	
	and cultural status (ESCS), (2003)	
Indicator A8	Labour force participation by level of	
T.l.l. AO 1.	educational attainment 104	A8
Table A8.1a	Employment rates and educational attainment,	
Table A 8 2a	by gender (2004)	
Table 110.2a	by gender (2004)114	
Table A8.3a	Trends in employment rates, by educational attainment	
14616116,64	(1991-2004)116	
Table A8.4a	Trends in unemployment rates, by educational attainment	
	(1991-2004)	
Indicator A9	The returns to education: education and earnings120	A9
	Relative earnings of the population with income from	
	employment (2004 or latest available year)135	
Table A9.1b	Differences in earnings between females and males	
	(2004 or latest available year)	
	Trends in relative earnings: adult population (1997-2004)	
Table A9.3	Trends in differences in earnings between females and males	
T-1-1- AO 4-	(1997-2004)	
Table A9.4a	Distribution of the 25-to-64-year-old population, by level of earnings and educational attainment	
	(2004 or latest available year)	
Table A9.4b	Distribution of the 25-to-64-year-old males by level of earnings	
	and educational attainment (2004 or latest available year)144	
Table A9.4c	Distribution of the 25-to-64-year-old females by level of earnings	
	and educational attainment (2004 or latest available year)147	
Table A9.5	Private internal rates of return for an individual obtaining an	
	upper secondary or post-secondary non-tertiary education,	
T11 40 6	ISCED 3/4 (2003)	
Table A9.6	Private internal rates of return for an individual obtaining	
Table A9.7	a university-level degree, ISCED 5/6 (2003)	
Table A7. /	Public internal rates of return for an individual obtaining an upper secondary or post-secondary non-tertiary education,	
	ISCED 3/4 (2003)151	
Table A9.8	Public internal rates of return for an individual obtaining	
_	a university-level degree, ISCED 5/6 (2003)151	

			Name of the indicato in the 2005 edition
Indicator A10	The returns to education: links between education, economic growth and social outcomes	152	A10
	Impact of demographic trends on education provision  Demographic trends between 2005 and 2015 and indicative impact on educational expenditure, student enrolments and graduate numbers		
CHAPTER B	FINANCIAL AND HUMAN RESOURCES INVESTED IN EDUCATION	167	
Indicator B1	Educational expenditure per student	170	<b>B</b> 1
	Annual expenditure on educational institutions per student for all services (2003)		
Table B1.1b	Annual expenditure on educational institutions per student for all services, by type of programme (2003)(2003)	187	
Table B1.1c	Annual expenditure per student on core services, ancillary services and R&D (2003)		
Table B1.2	Distribution of expenditure (as a percentage) on educational institutions compared to number of students enrolled at each level of education (2003)	189	
Table B1.3a			
Table B1.3b	Cumulative expenditure on educational institutions per studen over the average duration of tertiary studies (2003)	t	
Table B1.4	Annual expenditure on educational institutions per student for all services relative to GDP per capita (2003)		
Table B1.5	<u></u>	ees	
Indicator B2	Expenditure on educational institutions relative		D2
Table B2.1a	Expenditure on educational institutions as a percentage of GDP, for all levels of education (1995, 2000, 2003)		B2
Table B2.1b	Expenditure on educational institutions as a percentage of GDP, by level of education (1995, 2000, 2003)		
Table B2.1c	Expenditure on educational institutions as a percentage of GDP, by level of education (2003)		
Table B2.2	Change in expenditure on educational institutions (1995, 2003)		
Table B2.3	Change in expenditure on educational institutions (1995, 2000, 2001, 2002, 2003)		
<b>Indicator B3</b> Table B3.1	Public and private investment in educational institutions		В3

		Name of the indicato in the 2005 edition
Table B3.2a	Relative proportions of public and private expenditure on	
	educational institutions, as a percentage, by level of education	
Table B3.2b	(1995, 2003)	
Tuble B3.20	educational institutions, as a percentage, for tertiary education	
	(1995, 2003)220	
Table B3.3	1 1 1	
	educational institutions, for tertiary education	
	(1995, 2000, 2001, 2002, 2003)221	
Indicator B4	Total public expenditure on education 222	B4
Table B4.1	Total public expenditure on education (1995, 2003)228  Distribution of total public expenditure on education (2003)229	
Indicator B5	Tuition fees charged by tertiary institutions and support for students and households through public subsidies230	DF
Table B5.1	Estimated annual average tuition fees charged by tertiary-type A	В5
Tubic B5.1	educational institutions (school year 2003-2004)240	
Table B5.2		
	percentage of total public expenditure on education and GDP,	
	for tertiary education (2003)242	
Indicator B6	Expenditure in institutions by service category and	
TIL DC4	by resource category244	В6
Table B6.1	Expenditure on institutions by service category	
Table B6.2	as a percentage of GDP (2003)252 Expenditure on educational institutions by resource category	
14616 2012	and level of education (2003)253	
CHIA PEED C	A COURGE TO THE ATTION OF PETICIPATION AND	
CHAPTER C	ACCESS TO EDUCATION, PARTICIPATION AND PROGRESSION	
Indicator C1		
indicator Ci	to adult life256	C1
Table C1.1	Education expectancy (2004)	
	Enrolment rates, by age (2004)266	
Table C1.3	Transition characteristics from age 15 to 20,	
	by level of education (2004)267	
	Participation in secondary and tertiary education268	C2
Table C2.1	Entry rates into tertiary education and age distribution of new entrants (2004)277	
Table C2-2	Expected years in tertiary education and changes	
14010 02.2	in tertiary enrolment (2004)278	
Table C2.3	Students in tertiary education by type of institution	
	or mode of study (2004)279	
Table C2.4	Students in primary and secondary education by type of	
Table C2 F	institution or mode of study (2004)	
rable C2.5	Upper secondary enrolment patterns (2004)281	

Name of
the indicator
in the
2005 edition

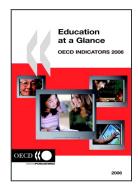
		2003 cq100
Indicator C3	Student mobility and foreign students in tertiary education	C3
Table C3 1	Student mobility and foreign students in tertiary education	CJ
Table C3.1	(2000, 2004)	
Table C3-2	Distribution of international and foreign students in tertiary	
14510 03.2	education, by country of origin (2004)304	
Table C3.3		
14610 00,0	by country of destination (2004)	
Table C3.4	Distribution of international and foreign students in tertiary	
	education, by level and type of tertiary education (2004)310	
Table C3.5	Distribution of international and foreign students in tertiary	
	education, by field of education (2004)311	
Table C3.6	Trends in the number of foreign students enrolled outside	
	their country of origin (2000 to 2004)312	
Table C3.7	Percentage of tertiary qualifications awarded to international	
	and foreign students, by type of tertiary education (2004)313	
	, ,,	
	Education and work status of the youth population314	C4
Table C4.1a	Expected years in education and not in education	
	for 15-to-29-year-olds (2004)323	
Table C4.2a	Percentage of the youth population in education	
	and not in education (2004)	
Table C4.3	Percentage of the cohort population not in education	
	and unemployed (2004)327	
Table C4.4a	Trends in the percentage of the youth population	
	in education and not in education (1995-2004)329	
Indicator C5	Participation in adult learning334	C6
Table C5.1a	Participation rate and expected number of hours in non-formal	
	job-related education and training, by level of educational	
	attainment (2003)341	
Table C5.1b	Expected number of hours in non-formal job-related education	
	and training, by age group and labour force status (2003)343	
Table C5.1c	Expected number of hours in non-formal job-related education	
	and training, by level of educational attainment (2003)345	
CHAPTER D	THE LEARNING ENVIRONMENT AND ORGANISATION	
	OF SCHOOLS 347	
Indicator D1	Total intended instruction time for students in primary	
indicator Di	and secondary education348	D1
Table D1.1	Compulsory and intended instruction time	Di
14010 151.1	in public institutions (2004)356	
Table D1 2a	Instruction time per subject as a percentage of total	
14010 101.24	compulsory instruction time for 9-to-11-year-olds (2004)357	
Table D1.2h	Instruction time per subject as a percentage of total	
10010 10111111	compulsory instruction time for 12-to-14-year-olds (2004)358	

Name of the indicator in the 2005 edition Indicator D2 Class size and ratio of students to teaching staff.......360 D2

Table D2.1	Average class size, by type of institution and level of education (2004)	70	
Table D2.2	Ratio of students to teaching staff in educational	70	
	institutions (2004)3	71	
Table D2.3	Ratio of students to teaching staff by type of institution (2004)3		
Indicator D3	Teachers' salaries3	74	D3
Table D3.1	Teachers' salaries (2004)	84	
Table D3.2a	Adjustments to base salary for teachers		
	in public institutions (2004)	86	
Table D3.2b	Adjustments to base salary for teachers in public institutions		
	made by school principal (2004)3	88	
Table D3.2c	Adjustments to base salary for teachers in public institutions		
	made by local or regional authority (2004)3	90	
Table D3.2d	Adjustments to base salary for teachers in public institutions		
	made by the national authority (2004)3		
Table D3.3	Change in teachers' salaries (1996 and 2004)3	94	
Indicator D4	Teaching time and teachers' working time	96	D4
Table D4.1	Organisation of teachers' working time (2004)4		
Indicator D5	Access to and use of ICT		
Table D5.1	Various ICT resources in secondary schools and percentage	00	
Table D5.1	of various types of computers in schools (2003)4	.14	
Table D5.2	Percentage of students in secondary schools whose principals	• '	
Tuble D3.2	report that instruction is hindered by a shortage		
	of ICT resources (2003)4	-15	
Table D5.3	Percentage of 15-year-old students using computers at home,		
	school or other places, by frequency of use (2003)4	-17	
	1		
ANNEX 1	Characteristics of Educational Systems 4	19	
	Typical graduation ages in upper secondary education4	-20	
Table X1.1b	Typical graduation ages in post-secondary non-tertiary		
	education 4		
	Typical graduation ages in tertiary education4	-22	
Table X1.2a		2.0	
mili va ol	of indicators 4	-23	
Table X1.2b	School year and financial year used for the calculation	2.4	
T11 V1 2	of indicators 4	-24	
Table X1.3	Summary of completion requirements	2.5	
	for upper secondary (ISCED 3) programmes4	-25	
ANNEX 2	Reference Statistics4	-29	
	Overview of the economic context using basic variables		
	(reference period: calendar year 2003, 2003 current prices)4	-30	
Table X2.2	Basic reference statistics		
	(reference period: calendar year 2003, 2003 current prices)4	-31	

Name of the indicator in the 2005 edition

Table X2.3	Basic reference statistics	
	(reference period: calendar year 1995, 1995 current prices)43	32
Table X2.4	Annual expenditure on educational institutions per student	
	for all services (2003)43	33
Table X2.5	Annual expenditure on educational institutions per student	
	for all services (2003)43	34
Table X2.6a	Reference statistics used in the calculation of	
	teachers' salaries, by level of education (1996, 2004)43	35
Table X2.6b	Reference statistics used in the calculation of teachers' salaries	
	(1996, 2003)43	37
Table X2.6c	Teachers' salaries (2004)	38
ANNEX 3 (Sou	urces, Methods and Technical Notes)44	F1
References	44	<b>F</b> 3
Contributors	to this Publication	<b>F</b> 5
Related OECE	Publications 44	<del>1</del> 9



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