



SOROS FOUNDATION – LATVIA

A Passport to Social Cohesion and Economic Prosperity

Report on Education in Latvia 2000

Executive Summary

Riga 2001

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Executive Summary

Introduction

Education may be Latvia's most important public enterprise. As in all democracies, the public must understand and agree on the policies that guide it. More discussion of education issues is needed in Latvia, prior to making changes in education policy, not after them. This paper is our way to help stimulate some of that discussion. The paper draws heavily on prior analyses circulated by the Ministry of Education and Science, OECD, The World Bank, UNDP as well as on policy research sponsored by us.

The Soros Foundation – Latvia hopes to distribute reports annually on more specialized educational problems. However, no report can cover all issues of importance. This one tries to cover selected issues in primary, secondary, higher, vocational and adult education, as well as on teachers and education research. Serious difficulties are discovered in every area, and these must be addressed quickly.

At the end ten recommendations are offered. Each is important, but the public could add many more. And if that were to occur, we would feel that this report was a success.

Primary and Secondary Education

Latvian schools are often places where innovations mix with old-fashioned values to produce a lively and optimistic learning environment. New laws passed by the Saeima in 1991 (Education Law and on Latvia's nationalities and ethnic groups), 1993 (on craftsmanship), 1995 (National Education Concept, and on Tertiary Education), 1998 (new Education Law), and 1999 (general and professional education) have changed the way schools operate. But change is not reform, and Latvia needs a fundamental reform of its schools.

Some problems are not always obvious. Students today have more free access to foreign films and books than ever before. Latvian students spend more time watching television (2.6 hours/day) for instance, than students do in Canada (2.3 hours), Romania (1.9 hours) or France (1.5 hours). These new freedoms are associated with changes in attitude and behavior outside the influence of the school or public authorities.

Other problems are more obvious. Almost a quarter of those who finish Form Nine, leave without sufficient marks to continue their education or training, placing them at risk of social exclusion. Latvia prides itself on the positive results of its 'best and brightest' in international competitions in math and science. But when measurements are taken of the achievements of the typical student in Latvia, the results are mixed. In an international study measuring average achievement, in 8th grade science, only 1.6% of Latvia's students attained the top 10%. This compares unfavorably with the typical student in Romania (4.7%), Russia (11.2%), Slovenia (13.6%), and the Czech Republic (19.2%). In 8th grade mathematics 2.8% of Latvian students were in the top 10%, by comparison to 17.9% in the Czech republic. Out of 41 countries participating in the study, Latvia ranked 30th in 8th grade math and 32nd in science*. There are many possible explanations for these results. One is that the international tests were based on more modern curriculum objectives in which students are not asked about factual information, but about how to use apply it in creative ways. These objectives may differ from the tests designed by the Ministry of Education and Science. We may have to take a closer look at the content of our state examinations to see if sufficient emphasis is placed on performance (what a student is able to do) as opposed to knowledge (what a student is able to remember).

Although Latvia ranked much higher in some of the other grades and in informatics (second out of eight countries), more worrying were the recent results in Civics Education. This is one educational function which is still affected by the backward tradition associated with the Soviet era. In Civics Education Latvia ranked 26th out of 28 countries, about equivalent to Columbia, a country with considerable social cohesion challenges. In spite of strong educational traditions, Latvia has a serious problem. What is that problem, and how can it be addressed?

Experts often disagree on the importance of one problem verses another. The most serious, we believe, can be categorized into three general groups: (i) governance and management, (ii) financial adequacy and equity, and (iii) the inadequacy of our system's social cohesion.

Governance. Most experts in the Ministry of Education and Science and in the universities point to the challenges which result from the shift from education in the time of central planning to a system appropriate for a market

* These were the results in 1995. Latvia ranked 20th in sciences and 18th in math out of 38 countries in 1998.

economy and modern political democracy. Content, pedagogy, professional training, and the locus of decision-making all need to change. While only a few were involved in influencing education policy previously, decision-making authorities now include the Saeima, the Cabinet of Ministers, the Ministry of Education and Science and other ministries, regional and local governments, teacher associations, schools themselves, parental and other interest groups. Most importantly, the public itself now has good ideas, as it should, about the nature of education, about what students should be taught, about what should be emphasized and what not emphasized. Education is now treated as a public good and therefore is heavily influenced by the public itself.

The problem is that the organizational infrastructure necessary to manage these new demands and these new institutional participants is not in place. While the ministry struggles to meet its new responsibilities, old traditions continue. For instance, the Ministry struggles to provide research results and report educational progress to the Saeima. At the same time it continues to design a uniform education program, when local authorities can decide those issues. The problem is not one of de-centralization or centralization. The problem is the lack of clarity about how to divide functions between central, regional and local authorities.

Finance and Equity. Latvia's education problem is not primarily caused by having too few resources. After all Latvia increased the proportion of its public budgets for education from 5.8 % to 6.5% of GDP between 1989 and 1996, placing its educational expenditures among the top of the region. Latvia's problem is that it allocates resources inefficiently and inequitably. Latvian schools are among the most energy inefficient in the world, thus denuding resources which could be invested in teacher salaries and pedagogical materials. The burden for financing educational materials has been down loaded onto local authorities. This has created significant differences in expenditures between urban and rural areas. Because of the traditional manner of enforcing outdated teacher specializations, student/teacher ratios (1: 10.2) are among the lowest in the world. Although complex and sensitive, Latvia needs to rethink how it allocates educational finances. Many of the budgetary allocation decisions need to be made by schools themselves. Current resources are used to support tiny class sizes and outdated materials and techniques. These need to shift. They are needed to support modern equipment and pedagogical techniques so that the system can teach flexibly and creatively.

Social Cohesion. But none of the above would achieve our national goals without attention to the problem of education social cohesion. The current legislative goal is to have all pupils attend secondary school in the state language by 2004. And although the proportion of grade one

students studying in languages other than Latvian has declined (from 18,000 in 1990 to 6,000 in 1999), nevertheless of those who speak Russian in the home, 72% use Russian as the medium of instruction. The rights of minorities in Latvia remain important. However, the 'separate but equal' systems of Latvian and Russian, originally established under the Soviets, remain. This division is not the same as having schools for the small percentage of other minorities. It is more important and hence more sensitive. Nevertheless, like other countries with school systems inherited from an old regime, Latvia has discovered serious side effects to the separation of its youth into two groups. One side effect is the handicap to a common sense of social value and citizenship.

Vocational Education

Differences are obvious. When an economy is centrally administered as it was during the time of the USSR, state industries and the sector ministries that used to govern those state industries control vocational education. But when an economy is governed by market forces, vocational education – the kinds of course offerings and the nature of the skills taught – have to be determined by demand from private industries. And vocational schools have to be free to respond to those demands. Clearly Latvia's vocational system has suffered in the transition. The number of students in vocational secondary schools declined from 67,000 in 1990 to 48,000 in 2000, a reduction of 29%. Similarly the proportion of students in general secondary programs increased from 41,000 in 1990 to 53,000 in 2000, an increase of 53%. Nevertheless, approximately one third of the secondary students (by comparison to 27% in Lithuania) remain enrolled in vocational or technical education programs. The question remains: what do vocational programs offer and who should determine it?

Central ministries other than the Ministry of Education and Science still oversee vocational educational content, curriculum and program. Sector ministries design and approve the standards, provide for control of educational institutions under their authority, and set the examinations, thus continuing the structure as when the economy was centrally planned.

This structure prevents vocational education institutions from performing as others do in market economies. It prevents them from responding to shifts in demand from the labor market. This is particularly important when the demand originates from new developments outside the traditional sector ministry's responsibility, for example, from small business development instead of manufacturing, from information technology instead of agriculture. Compared to other market economies, employers in Latvia have few mechanisms to influence vocational programs.

One explanation for the precipitous drop in enrollment is that Latvia's vocational institutions themselves have not been able to freely shift their curriculum and instruction away from outdated skills and specializations. If free to develop programs in response to the new labor market demands, there is no reason why vocational institutions couldn't regain the relevance and enrollment they once had.

Language of Instruction

We are deeply concerned about bilingual education in Latvia. Bilingual education is necessary to make a smooth transition from the language of the home to the state language that is necessary for higher education and effective employment. But bilingual education is not solely for use in communication. It is also important as a symbol of wider social policy. Our concern stems from several factors.

First is the history of the language problem. Soviet nationality policies provide an important background. Our national language was the subject of considerable discrimination. The Russian-speaking population was increased from 9 % in 1935 to 34% in 1989, while the Latvian-speaking population declined during that same period from 77% to 52%. Since 1945 Russian language schools were separated from others and children in Russian-language schools were educated according to the same ten-year school program as in Russia. To a large extent, the outcome of Soviet nationality policy was the establishment of the two-school sub-system. But they were hardly equal. Latvian-speaking children had Russian four times/week and had to stay in school one year longer; Russian-speaking children had classes in Latvian once or twice/week. By 1990, there was 100% literacy by non-Latvian speakers in Russian, but only 20% literacy in Latvian by non-Latvian speakers. Thus one concern we have over bilingual education has to do with the origin of the school structure and its effects on the sense of common citizenship.

The Soros Foundation-Latvia has significantly contributed to the development of bilingual education curricula by preparing teachers for bilingual education and has supported the project of "Open School". But curricula is not the only need.

Another concern has to do with the nature of the bilingual 'models' designed by the Ministry of Education and Science and the way in which they are offered to schools in local communities. It is not that the models are inappropriate. Rather the concern is that the models are offered for Non-Latvian schools only. This implies that public schools are separated into 'Latvian' and 'bilingual' groups. The aim seems to be to teach non-Latvian speaking students to speak Latvian and their own language. Yet bilingual edu-

cation could be interpreted more broadly. It could be used to equip all students with two or more international languages. And it could be used to acquaint all students with the many different languages and cultures out of which Latvia, as a nation, is fashioned.

As we see it, the problem is that in schools with Latvian as the language of instruction there are few minority-oriented or social and ethnic cohesion-promoting programs. In a Latvian language school one learns about Latvian culture, while other heritages – Jewish, Russian, Polish, Roma – are treated as 'foreign'. This does not stimulate the transformation of a school with Latvian as the instruction language into a modern European school representing the Latvian society as multi-ethnic.

An additional concern has to do with close association between language of choice and pedagogy of choice, and the question of who should make these choices – the central ministry, the local district, schools, teachers or parents. Choices are numerous, some more appropriate for certain students. This is true of the different bilingual education models, but also for different styles of pedagogy, based on Steiner, Montessori, Dewey, Schiller, Shadrikov, and Vygotsky etc. How should these decisions be made and by whom? Which pedagogical style to use? Which educational materials? How often should courses be offered? And what time of day should particular subjects and topics be offered?

Modern school systems share certain characteristics. One of them is the requirement for having a range of appropriate choices available which best fits the style of learning and the orientations of different students. These choices are best when they are guided by national performance standards and decided on the local level as to how those standards best can be implemented. We believe bilingual education should shift to multi-cultural education, and we believe that multi-cultural education should be for everyone. We believe that bilingual education is best when implemented by the users. As long as the ultimate direction is clearly established – fluency in the national language by all, and the acquisition of European and foreign languages by all – then most other choices can be left to those closest to the students and their families.

Education Research

There is no more important problem in a democracy than research supported by public agencies. Because education is such a public issue, because so many people and institutions take an interest in it, the Ministry of Education and Science has a special responsibility to report on new innovations and areas that are causing problems. Among the most important new functions of the Ministry of Education and Science is the obligation to report edu-

cational progress to the public. How that gets done – how the ministry sets research priorities, how the public learns the results and participates in discussing those results, and how the data are shared with the public – is a deep concern.

Educational research has problems. Frequently mentioned is its low relevance to policy problems. Few results find their way into the design of new legislation, education administration or education policy reform. Data on educational expenditures is not regularly reported, nor are rates of economic return to education investments. When the Ministry of Education and Science sponsors research, priorities for that research are sometimes established without public consultation.

Topics can sometimes focus on issues of relative unimportance while topics of critical importance remain unexamined. When topics are set in conjunction with educational demand or problems – as with proposals for student loans and a centralized examination system – research results can be a critical element in reaching a policy consensus.

But in general, education research is concentrated in public institutions favored by central authorities. The international standards which are followed in Latvia's participation in cross-national research is sometimes missing in local research projects. Perhaps most importantly, the use of policy research in education is only beginning. Research traditions in education often over-emphasize psychological factors and under-emphasize education finance, management and the social and economic context. By contrast, research priorities are set differently in the Ministry of Social Welfare, and in terms of quality and relevance to immediate problems, the results of their research may be higher than the research supported by the Ministry of Education and Science.

Teachers

Most of Latvia's teachers are female, underpaid, work long hours, and feel tired. In spite of the effort to change curriculum and pedagogical standards, the lack of investment in equipment, materials and opportunities for upgrading, has meant that teachers are forced to teach in ways which have not significantly changed.

Eighty five percent of Latvia's teaches have over 24 contact hours/week. The average contact hours/week is 21 in Slovakia, 20 in Australia, 18 in France and Italy, and 13 in Japan. Fewer contact hours do not mean that teachers work less, it means that students are taught more efficiently. One cannot appreciate the challenges of Latvian teachers without first understanding that education in all modern democracies requires a shift in professional responsibilities. The old style is for the teacher to be the

sole provider of information. The new style requires the teacher to be the manager of information. The information they have to 'manage' is derived from many sources (electronic, print, and experiential), and must be organized by carefully choosing different pedagogical styles depending on a complex series of immediate circumstances –subject, age/grade level, and student abilities. In essence, the teaching profession has changed, but Latvian teachers have not been able to keep pace with those changes.

Salaries of Latvian teachers have slipped to 75% of the average non-farm wage. Most teachers work more than one shift to make ends meet for their families. The proportion which reports that lack of time is their major concern, increased by 13% between 1996 and 2000. Only 17% of Latvia's teachers have access to the Internet, a technique considered essential elsewhere. Generally, state subsidies cover about 10 % of textbook costs, so some teachers have to struggle with the logistics of teaching classes without sufficient reading materials, similar to some of the world's poorest regions.

Teachers constitute 44/1000 of the non-agricultural labor force. This is larger than in France (38), Netherlands (34), or Germany (30). About 90% of Latvia's teachers are female, 53 % over age 40. Teachers (and health workers) in Latvia are the main reasons for differential female earnings. The opposite is also true. If there were a feasible way to increase the earnings of Latvia's teachers, it would constitute a significant reduction of the gender inequality of earnings in the country as a whole.

There are several reasons why individuals in the teaching profession tend to be older. One is that younger teachers often have scarce skills – in European languages, computer technologies, communications, psychology, business and economics. They leave because the salaries are low by comparison to alternative opportunities. Another reason is that few young teachers enter the profession. Over 50% of those who qualify as teachers from higher education choose to not enter the profession. This adversely affects the teaching profession, but it also constitutes a serious inefficiency in higher education. And teachers leave because there is no systematic method for them to improve their skills. There is no system of in-service upgrading.

Latvia's future depends on finding a solution to the teacher dilemma. How can teacher salaries be increased to the point where young and talented will want to remain in the profession? How can the profession be upgraded systematically so that the techniques used are consistent with new curricular performance standards of a modern democracy? And how can this be accomplished within the constraints on Latvia's public expenditures?

Higher Education

When Latvia's economy and labor market were administered by the USSR government, enrollment in higher education was artificially restrained. When its economy and labor market were free to develop on their own, the demand for enrollment in higher education exploded.

The proportion of 18 – 22 year olds in higher education grew from 15 to 26% between 1989 and 2000, a student increase of over 50%. This compares to an increase of 31% in Estonia and the Czech Republic, 64% in Hungary and 70% in Poland over the same period. In spite of the increase, students are still able to locate employment with comparative ease, by comparison to those leaving education at a lower level. Unemployment is 19% for those with primary education or less but only 8% following higher education. Latvian students now shoulder an increasing proportion of the tuition. Of the 34,000 students enrolled at the University of Latvia in 2000, 61 % financed the costs of their own tuition. This trend may be expected to continue. For instance, the number of students financed by the state budget increased by only four percent between 1999 and 2000, but that same year the number of students financing their own tuitions increased by 43%. Universities themselves have had to diversify their resources. Thirty percent of the typical budget of Latvia's universities originates from non-state sources.

Enrollment is up. Employment across disciplines is high. Student demand for higher education continues to rise in spite of a corresponding rise in private tuition and fees. Research functions have been integrated into the university structures. Program fragmentation has been reduced by requiring a minimum of five specialized faculty before a new program can open. New rules allowing students to transfer from colleges to universities have been designed. A new system of academic credits will allow more frequent transfer between courses. Many new courses have been established using international experts for accreditation. Does Latvia have a problem in higher education? It does.

Employers point out that the graduates are unable to learn quickly. They say that graduates may have a factual understanding of their disciplines but little understanding of how to apply it. The mechanisms that exist in Europe – employer curriculum councils, internship programs, 'sandwich training' (alternative on the job and in university training) are rare. Specialized institutions remain under auspices of the Agriculture, Interior and Welfare Ministries as they did under the Soviet Union. By comparison to the U.K. and other countries, universities in Latvia have less control over their own programs and budget allocations. Programs are accredited and publicly funded faculty positions are planned centrally. Formulae for resource allocation are based on historical precedent, therefore pro-

grams with low demand sometimes continue. The absence of a rigorous system of allocating resources per/student inhibits a department's ability to reallocate from low to high demand programs. And the continuation of common salary scales inhibits departments from rewarding faculty with scarce skills and high performance records. Financing is not transparent. Because the formulas are not publicly available public discussion and comment over resource allocation is rare. Students do not know how their fees are derived, what they cover, or what their rights are with respect to quality standards. Feedback mechanisms in which university faculty are held accountable by students are nascent. Universities are expected to generate their own resources but when they do, they are taxed as if they were commercial businesses. Universities need to borrow money for capital construction, but it is not yet legally determined whether Latvian universities can use land as an owned asset.

Rapid increase in enrollment has not been matched by an increase in infrastructure. Space is limited. Use of teaching technology is infrequent. Materials are often outdated. By international standards, library search engines are primitive. Students have to struggle to contact teachers, a problem of particular importance now that over half of them work in addition to attending higher education. Half the students in higher education attend part time, requiring them to take longer to complete their programs. In spite of the change in the kind of typical student, courses are not often offered at night, on weekends, by Internet or in convenient locations.

European democracies generally enroll between 35 and 40 % of the relevant age cohort, compared to Latvia's 25%. In the U.S. the majority of students are working adults. As economies change, curricula change. The European Union has expressed a concern about the quality and demand for higher education in terms of equivalence in degrees as well as competitiveness with other regions. In Latvia, of the 354 programs, 324 are accredited, 64% for six years. But does this process mean that Latvia's higher education system is equivalent in quality of programs available elsewhere?

What would we discover if we were to submit higher education programs to new international standards? Would social science courses include up to date computers to incorporate survey experience? Would courses in behavioral sciences have 'state of the art' laboratory resources available? Would courses in medicine, law or business have incorporated new cross-disciplinary innovations available elsewhere? In some instances they would, but in other instances perhaps they would not. One problem with assessing higher education quality is that criteria are changing.

Countries are now beginning to measure the quality of higher education using criteria which differ from those

used in the traditional process of accreditation. Instead of inputs the new criteria use outputs.

One output measure for instance, is known as higher education 'exports'. Countries are said to have high quality in higher education if higher education 'exports' (the number of paying external students willing to study in a country) are greater than higher education 'imports' (the number of paying local students willing leave to study outside their own country). In the former, education is an 'export' because revenues and talent come into a country. In the latter, education is an import, because local citizens buy it elsewhere.

Many countries are discovering that this 'output' based method of assessing quality is as important as the older accreditation methods based on inputs. As the standards rapidly shift in Europe to meet the new demands from Asia and North America, the question is whether the current status of higher education in Latvia are adequate.

Adult Education

Higher education and adult education constitute parallel but not identical problems. Both are affected by the economy in which a person is expected to have as many as five or six career changes over a working lifetime. How can the new skills and professional upgrading occur in Latvia when we don't have a national policy on adult education? Other democracies are rapidly shifting to lifelong learning. Latvia is not.

Although the Ministry of Education and Science must expand the level of its support, no amount of public financing will be sufficient. Nor can the delivery of adult education through public institutions be sufficient. The problem cannot be addressed through traditional solutions. The time may be opportune to be creative about financing and delivery of adult education. We may want to think about a new national strategy utilizing the many different available participants – local and international commercial firms, various government ministries, higher education institutions, entrepreneurial training institutions, local and public authorities, and private individuals willing to invest in their own training.

Ten Recommendations

One: The Ministry of Education and Science should be in charge of what students should know and be able to do when they leave Latvian education. It should help the public understand why they are important. Additional functions should include the assurance of equality in educational finance across regions, the support of high quality research, the monitoring of progress, and the provision of

clear and effective reports to the public on significant innovations and educational progress.

Local and school authorities and teachers should be in charge of how to put into effect the national requirements, i. e., the choice of program and pedagogy, in essence to exercise their own professional judgment on how to educate.

Parents should have the right to choose from among the available styles of education perhaps available in different schools, recognized by state authorities or different programs within the same school, which they feel is most appropriate for their child.

Public financing/student should follow their preferences.

Two. Teachers should be upgraded on a continuing basis, assessed for their mastery of new standards, and rewarded differentially on the basis of their new qualifications. Teacher training should be provided by many kinds of institutions.

Three. Education, Culture and Language. Since students study a common curriculum and sit for common examinations, the language used in the home should not be used to segregate the school experience of students in Latvia. The right of small minorities to be educated in the language of their family should be preserved, but this right should not come at the expense of a common experience. The purpose of bilingual education might be broadened so that all students could benefit equally from having exposure to multiple languages and cultures. Parents and teachers should be able to help design the style and the philosophy of instruction in accordance with the differing needs of individual students.

Four. Vocational education should be managed by the same authorities which manage all education. Professional programs should be authorized on the basis of student demand; those with insufficient demand should be allowed to shift to new courses and specializations.

Five. Education research should be based according to the priorities for reform. It should be policy-oriented and used for policy decision-making.

Six. Higher education administration should be restructured in accordance with the current reforms in other democracies. For instance it might be wise to separate professional licensure from higher education institutions. It might be wise to have accreditation of new institutions and programs made by independent bodies representing public and private interested parties. Higher education reforms in Latvia have many implications and consequences, and should be studied in depth with an eye on major reforms now under way in other democracies. Consideration should be given to external financing for reform programs in higher education.

Seven. Adult education should be rapidly expanded, but in addition to government, it should be financed in

creative ways – employer-training taxes, local government contributions, and user fees might be considered. Public and private institutions should provide adult education.

Eight. Educational Taxation and Property Rights. A study should be made of the regulations governing taxation and land ownership rights of educational institutions. It might be wise to consider making a distinction between profit-making (equity owned) educational institutions, and educational institutions that are non-profit making. To encourage creative management and financial autonomy, consideration should be given to excusing non-profit education institutions from taxation.

Nine. Education Policy Training New degree programs should be created for the training of Latvian experts in educational policy, drawing the best ideas and principles from political science, economics, public and business administration.

Ten. Education Policy Discussion. Sound education policy requires sound social partnerships. Policy makers should involve the society in the decision-making process. Public discussions should take place before – not after – decisions are made. To help stimulate this discussion and to elevate its stature, there should be National Council on Education with members drawn from schools, parents, government agencies, parliament, NGO, private foundations, and businesses. The National Council should periodically report to the public on its discussions and recommendations for the good of the nation.

Conclusions

Though it is important to know and understand the factual evidence, education policy is not a science. On the other hand, there are international ‘standards of engagement’ in the design and agreement on education policy. Those standards include the necessity for open and public consensus. They include questioning of current practice yet at the same time, the maintenance of tradition and respect for authority. Education is essential for our development and for our health as a nation. But it cannot succeed if all citizens do not support it. The task of this report has been to set in motion ideas for improvement. The intention has been to improve the quality of educational reform through public discussion. For instance, the Soros Foundation – Latvia will soon open an Internet portal for the purpose of helping to stimulate discussion over this and other policy papers and strategic proposals.

The reader may find some of these ideas more compelling than others. This is normal. The central task of this report has been to provide ideas that will stimulate others to take an interest in education problems, and help re-design our education policies so that all citizens may equally benefit.

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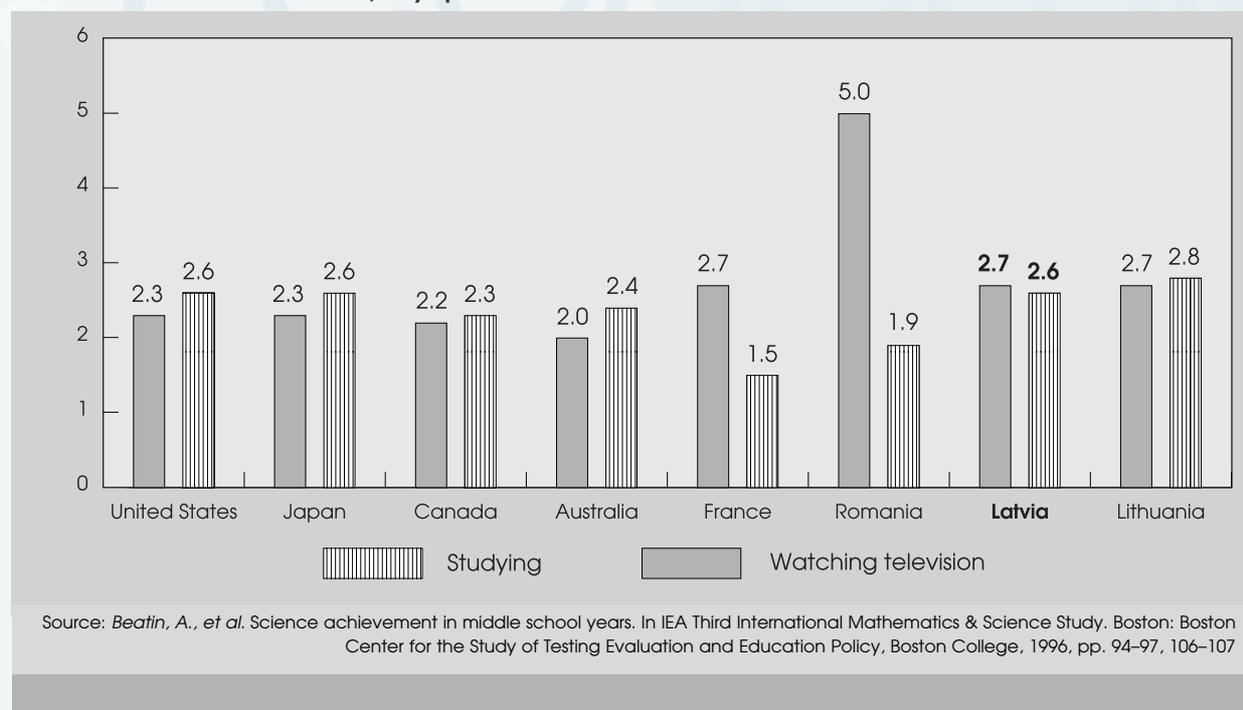
Appendix

Percent of students (and graduates) by field of study

	Education	Humanities	Law, Social Science	Natural Science, Engineering, Agriculture	Medical
Latvia	23 (19)	11 (8)	26 (28)	34 (37)	5 (5)
U. K.	9 (6)	14 (13)	32 (32)	31 (28)	14 (13)
France	4 (14)				
Germany	5 (3)	15 (8)	30 (23)	35 (38)	10 (19)
Netherlands	13 (13)	9 (8)	48 (39)	20 (23)	10 (14)
U. S.	(10)	(17)	(38)	(19)	(11)

Source: World education report: teachers and teaching in a changing world. Paris: UNESCO, 1998, p. 155

Number of out-of-school hours/day spent



Vocational secondary enrollments (percent of 15–17 year-old age groups)

	1989	1996	Percent change
Latvia	21.5	20.5	-4.7
Hungary	36.1	25.1	-30.5
Slovakia	37.2	25.4	-31.7
Kazakhstan	19.0	11.0	-42.1
Romania	20.3	16.9	-16.7
Poland	37.5	27.0	-28.0
Source: Education for all? Regional monitoring report. UNICEF, 1998, p. 113			

Percent of female students in each field of study

	Education	Humanities	Law and Social Science	Natural Science, Engineering, Agriculture	Medical
Latvia	81	78	59	28	69
Denmark	75	68	41	28	80
France	74	71	58	30	63
U.K.	73	61	51	24	77
Germany	72	62	44	21	62
Source: World education report: teachers and teaching in a changing world. Paris: UNESCO, 1998, p. 155					

Tertiary education enrollment (gross rates percent of 18–22 age group)

	1989	1996	Percent Change
Czech Republic	12.7	16.6	+ 30.7
Poland	11.6	19.7	+ 70.0
Hungary	13.9	22.9	+ 64.7
Latvia	15.2	22.8	+ 50.0
Estonia	14.2	18.6	+ 30.9
Source: Education for all? Regional monitoring report. UNICEF, 1998, p. 113			

Percent of Students Achieving TIMSS International Top Levels in Grade 8 Math

	Top 10 Percent	Top 25 Percent
Czech Republic	17.9	38.8
Slovakia	12.3	33.4
Slovenia	10.8	30.8
Hungary	10.8	29.3
Russia	9.7	29.3
Romania	3.1	13.2
Latvia	2.8	13.7

Source: Vari, P. (red.) Are we similar in math and science? IEA, 1997, p. 110

Percent of Students Achieving Timss International Regional Top Levels In Grade 8 Science

	Top 10 Percent	Top 25 Percent
Czech Republic	19.2	40.7
Hungary	13.6	33.6
Slovenia	13.6	34.4
Slovakia	12.1	29.5
Russia	11.2	28.7
Romania	4.7	16.1
Latvia	1.6	9.7

Source: Vari, P. (red.) Are we similar in math and science? IEA, 1997, p. 110

Latvia: changes in enrollment, 1990–2000

	Preschool	Elementary	Primary	General Secondary	Secondary Vocational
1990	74 423	143 338	166 199	40 700	67 409
2000	54 915	134 919	164 102	62 411	47 703
Percent Change	-26,2	-5,9	-1,3	+53,3	-29,2

Source: Development of education: national report of Latvia. Geneva: International Bureau of Education, 2001, March 29, p. 13

Teachers as a Percentage of Non-Agricultural Labor Force

United States	31
France	38
Germany	30
The Netherlands	34
U. K.	31
Latvia	44
Lithuania	44

Source: World education report: teachers and teaching in a changing world. Paris: UNESCO, 1998, p. 147

Percent of students in general secondary and vocational/technical tracks

	1989	1997	Percent change
Latvia			
• General secondary	32.0	52.1	+62.8
• Vocational/technical	68.0	46.9	-31.0
Lithuania			
• General secondary	36.7	54.2	+47.6
• Vocational/technical	63.3	45.8	-27.6

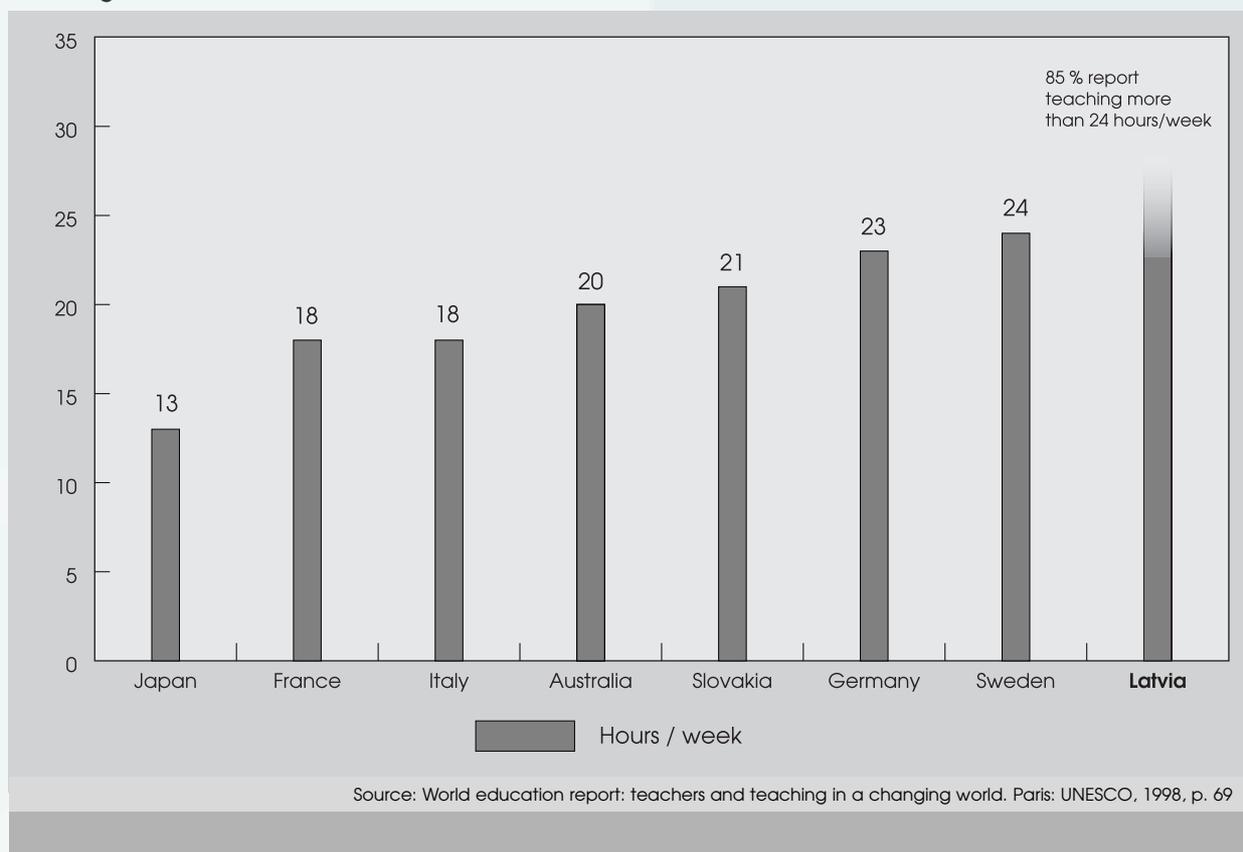
Source: Hidden challenges to education systems in transition economies. Washington, D. C.: World Bank, 2000, p. 115

Unemployment rate by education level in Latvia, 1997 (Percent)

Primary or less	19.4
General secondary	20.6
Vocational secondary	15.0
Tertiary	7.7

Source: Hidden challenges to education Systems in transition countries. Washington, D. C.: World Bank, 2001, p. 121

Teaching hours/week



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