

# PUBLIC EDUCATION IN HUNGARY

*Chris Cooper*



*Educational policy in Hungary must deal with the hot issue of cost-effectiveness in the overall dimensions of quality, efficiency, and equity.*

— Judit Lannert, Researcher for the National Institute of Public Education (2004)

The Hungarian economy is currently in a period of transition. Throughout the 1990s Hungary experienced a massive inflow of foreign direct investment because Western companies were attracted by economic incentives, such as the country being a cheap source of labor. As companies have now become more interested in the cheap labor markets of East Asia, Hungary has been pressured to find new ways to attract foreign capital. Consequently, Hungary will have to rely more on the intelligence and the abilities of its labor force. In the years to come, the success of Hungary's economy will therefore be decided by the quality, efficiency, and equity of its educational system.

This article will evaluate the "quality" of the Hungarian educational system based on the performance of students on standardized tests that have been conducted in multiple countries. Although their reliability has not been universally accepted by educational researchers, these test scores are probably the best measure of educational quality in terms of Hungary's inter-

national ranking. One of the weaknesses of relying solely on standardized tests to evaluate quality is that they focus primarily on reading comprehension, mathematics, and science. To fully evaluate the quality of Hungary's educational system, it is also important to determine how broad-based the curriculum is. Ideally, students should be gaining knowledge in multiple disciplines and learning skills that will help them excel in the future. Over the past two decades, Hungary has been reforming the structure and content of primary and secondary education in an effort to improve the quality of the system.

"Efficiency" means to produce effectively with a minimum of inputs or wasted resources. I will not evaluate the efficiency of Hungary's educational system in terms of buildings and equipment, but rather by analyzing students, teachers, and curricula. Specifically, in this article I will examine the great imbalance that exists in the student-teacher ratio and the effects of the 2002 pay increase for public

employees. Furthermore, I will argue that the amount of information that teachers are expected to cover has grown unreasonably large, and that the curricula must be pared down to alleviate the burden on both students and teachers.

The “equity” of the Hungarian educational system is being measured by the parity among schools, rather than within them. I will not argue that the goal of education is for every student to achieve equal test scores. However, the performance of students on standardized tests should not be drastically different when comparing scores among schools and among regions throughout the country.

The purpose of this article is to explore the main challenges that face the system of primary and secondary public education in Hungary. As previously stated, the most appropriate way to address this topic is to analyze three main aspects of the system: the levels of quality, efficiency, and equity. To evaluate quality it is essential to first understand the series of reforms that have been enacted since the fall of communism.

## Quality of the Educational System

### Reforms

The quality of the Hungarian educational system has gradually been improving, due to reforms that have taken place over the last twenty years. In the 1980s, the autonomy of local schools was hindered by the central government, which controlled school budgets and required teachers to follow a detailed national curriculum. Some of these barriers were lifted in 1985 with the passing of the Public Education Act — a piece of legislation that strengthened the rights of schools. (Aradi, Halász and Nagy, p. 256) In 1990 municipalities took over official ownership of primary and secondary schools. By 1993 the Public Education Act was amended to give parents the right to choose which institution their child would attend. The amendment also gave schools more control over lesson plans, organization, and budgeting. (Kádár-Fulop, p. 3)

The next step was taken in 1995 when lawmakers abolished the mandatory central curriculum and created the National Core

Curriculum (NCC) — a guideline that gives teachers more freedom over the content of their lessons, but still defines the knowledge that a student must possess at the end of the fourth, sixth, eighth, and tenth grades. The NCC does not define specific requirements for each grade because some students may require more time to grasp key concepts; by extending the intervals to two years, teachers have more time to work with students who learn at a slower pace. To ease the implementation of the new core curriculum and to allow teachers to introduce new courses of study, the NCC was designed to require only 50 to 70 percent of the average number of teaching hours to complete the standard requirements. (Eurydice European Unit, p. 19) This was supposed to provide local institutions with a significant degree of freedom to explore academic and cultural topics that were relatively new to the educational system, such as information technology and economics. (Lannert and Halász, p. 72) Before the NCC, curricula were almost entirely focused on mathematics, science, the Russian language, and classical history and literature, without much time spent on practical or interdisciplinary studies. Many institutions welcomed the opportunity to choose their own programs and textbooks. Schools had the option of creating their own local curriculum (assuming it fulfilled the requirements of the NCC), or they could choose from several models that had been approved by the central government.

However, there were some unfortunate side effects that occurred during the implementation of the NCC. For the large number of schools that attempted to create their own curricula, many were unprepared and overwhelmed by the task. To retain a competitive edge over other schools, many institutions added classes that concentrated on “facts and raw knowledge” and increased the amount of work for students. (Kádár-Fulop, p. 3) The development of the National Core Curriculum was a large step towards improving the quality of the Hungarian educational system from a *theoretical* standpoint. But in practice the NCC turned out to be exceedingly difficult to implement throughout the country; teachers and administrators were not fully prepared to meet the challenges of introducing new curricula. Also, as the NCC was being implemented in

1998, the governing party that had primarily supported it was voted out of office. From 1994 to the present, political power has shifted every four years between the Hungarian Socialist Party (MSZP) and the Fidesz-Hungarian Civic Union. (Hungary.HU) After the MSZP was voted out in 1998, the Minister of Education under the new government created the Frame Curricula — educational guidelines that regulated schools' curricula more strictly than the NCC had. The Frame Curricula were created as an addition to the NCC, rather than as a replacement; they were designed to regulate “the aims of education, the structure of teaching, the compulsory and common requirements and the numbers of periods necessary for their implementation.” (Eurydice European Unit, p. 19) By 2001 schools were responsible for introducing the Frame Curricula in the first, fifth, and ninth grades. But when the government changed hands again in 2002, the Frame Curricula were dropped as a mandatory requirement by the Ministry of Education. Over the last several years, the Frame Curricula have been opposed by social liberal governments and supported by the conservative side, which believes that school curricula should be closely regulated. (Radó, p. 19)

Over the last decade the implementation of so many government regulations has been overwhelming for teachers and administrators. According to Zoltán Kerber, Researcher and Curriculum Designer for Hungary's National Institute for Public Education, “The 1990s was a decade of interrupted reforms and implementations, and this made possible an absurd situation...” in which a series of outdated and recently created curricula can exist within a single school. (Kerber, p. 5) Each time a new governing party has taken control, new amendments and curriculum changes have threatened to paralyze schools with confusion and uncertainty.

Despite the problems that arise from the frequent implementation of reforms, Hungary has continued to modify its educational system to offer students more practical knowledge. During the 1990s Hungary's economy rapidly became intertwined with the economies of advanced Western nations, and the demand for English, German, and French language speak-

ers increased dramatically. Consequently, in 2003 the government amended the Public Education Act to provide an additional year for the study of foreign languages. Under the leadership of Education Minister Bálint Magyar, the government has placed even more emphasis on the importance of foreign languages and information technology over the last three years. Magyar is politically affiliated with the Alliance of Free Democrats, which is part of the governing coalition with the Hungarian Socialist Party. In an interview with the *Budapest Sun* in 2003, Magyar stated that “in Hungary people practically don't speak foreign languages” and added that “only about 20 percent of 18-year-olds had a medium-level diploma in a foreign language when they entered university.” (As quoted in Spencer, p. 1) He also mentioned that some students have tried to purchase language certificates on the black market after completing five years of university studies. Magyar believes that students significantly reduce their chances for economic success if they avoid learning the English language, and he has spent much of his time reforming the system to address this problem. His determination to improve the quality of Hungarian education in the area of foreign languages has yielded impressive results. In a 2005 interview with the *Budapest Sun*, Magyar stated that “about 400 high schools, which is about one third of the total, have intensive foreign language education in about 40 percent of their lessons.” (As quoted in Kiss, “Magyar: School Reform ...,” p. 1) Within the next year he hopes to expand this rigorous language program to an additional 100 high schools throughout Hungary. Along with a strong foreign language curriculum, the Education Minister has focused on improving information technology education to prepare students for the demands of the twenty-first century.

In 2002 Magyar introduced a plan that would provide public schools with the means to teach info-communications technology (ICT) skills to Hungarian students. The list of objectives that he has proposed under the “Schoolnet Express” plan includes: internet access for all schools by 2005, increasing the number of school computers, providing ICT education for 5th graders, offering a free computer skills

exam for teachers and graduating students, and the creation of a digital curriculum. (Lannert and Halász, p. 81)

As of the academic year 2005–06, the government has now succeeded in providing internet access to all high schools and has greatly increased the number of computers available to students at all levels of education. Unfortunately, the amount of ICT instruction that students can rely on is limited by the lack of qualified teachers in this area. The problem is gradually being solved by re-training teachers for ICT instruction, but the best way for children to have equal opportunities to develop ICT skills is to provide an incentive for families to purchase their own computers. In 2003 the government instituted a tax benefit program, through which families with school-aged children are eligible for a tax break of approximately HUF 60,000 (approximately \$285) for purchasing computer equipment. (Lannert and Halász, p. 81) By encouraging the use of computers at school and at home, the government hopes that students will be better prepared for the technological demands of the future.

### **International Ranking**

Despite the progress that has been made by the Hungarian government to modernize and improve the curricula of the public education system, the performance of students has been somewhat uneven on an international scale. Beginning in 2000, the Organisation for Economic Co-operation and Development (OECD) has conducted studies of educational quality and equity in 32 countries. The OECD Programme for International Student Assessment (PISA) evaluates the performance of 15-year-old students every three years in the fields of reading, mathematics, and science to identify positive and negative trends that affect educational attainment. The PISA exam is comprised of a two-hour academic assessment and a thirty-minute background questionnaire. The latter section includes a variety of questions about the student's school, community, and family to determine if causal relationships exist between socio-economic factors and test performance. A maximum of 35 students are randomly selected at each sample school, and they answer questions in the formats of short

answer, fill-ins, and multiple choice questions (the last of which is "understood as culturally Anglo-Saxon" and could reflect cultural bias). (Duru-Bellat and Suchaut, p. 182) However, it is unclear how significantly the format of the questions has affected the performance of students, if at all.

The first test was designed to focus primarily on reading comprehension, while the second and third tests (in 2003 and 2006) emphasized mathematics and science, respectively. (Goldstein, p. 3) These three areas of study are represented on the exam because they are fundamental components of education programs throughout the world. A subject such as history, though also commonly taught, could not be tested on an international scale without the heavy influence of cultural bias. However, some experts have argued that the content of reading comprehension questions is also susceptible to cultural bias. (Goldstein, p. 5) For example, a reading question that is accurately translated but which focuses on the subject of baseball might unfairly favor Americans over most European students.

In terms of reading comprehension, Hungary ranked 22nd out of 32 countries and achieved an average score of 480 points — 20 points lower than the international average. Hungary also performed poorly on the mathematical assessment, while achieving average international scores with regard to science. Unfortunately, Hungary's performance was not significantly better in 2003 when a second PISA report was conducted with greater emphasis on mathematics than reading comprehension. (Lannert and Halász, p. 113)

However, the PISA survey is not the only international exam that Hungarian students have taken in recent years. In 1999 the International Association for the Evaluation of Educational Attainment (IEA) conducted its Trends in Mathematics and Science Study (TIMSS) in 38 countries. This exam was taken by eighth grade students (who are generally 14 years old), one year prior to the PISA 2000 survey. As mentioned earlier, the students who participated in PISA 2000 were 15 years old; hence, the data for both tests was gathered from the same age group. (Naylor, p. 5) Nevertheless, the performance of Hungarian students in both science and mathematics was much better for

TIMSS than it was for PISA. In terms of mathematics, Hungarian students scored above the international average on TIMSS, but below the average on PISA. Their scores on the science section were also significantly lower on PISA than on TIMSS, suggesting that the design of the exams may have been a key factor. When discussing the content of the PISA exam, Hungarian teachers generally agreed that “a large part of the PISA tasks were missing from the list of common tasks used in Hungarian schools.” (Lannert and Halász, p. 114) Furthermore, the questions on the TIMSS exam were generally more straightforward than those on the PISA exam. Much like the Hungarian course of science education, students were “expected to utilize known algorithms... to calculate exact results.” (Lannert and Halász, p. 115) In contrast, the questions on the PISA exam required students to understand scientific concepts and reach conclusions based on probability.

Fred Naylor, an Educational Consultant from the United Kingdom, has argued that questions on the TIMSS survey were designed to test the “mastery of the school syllabus.” (Naylor, p. 5) The PISA, however, was directed to “so-called everyday life problems” that he believes are imprecise and confusing. (Naylor, p. 5) From another point of view, one may argue that the major difference between the exams is that the TIMSS tests students on their ability to memorize facts and formulas, whereas the PISA requires students to apply knowledge and reach broader conclusions. Nevertheless, the results from the two exams are inconsistent, and it is difficult to reach a conclusion about the international ranking of Hungary’s educational system and the performance of its students.

The type of problem-oriented education that is tested on the PISA exam is not common in Hungary; instead students learn by way of “frontal” teaching, which is based primarily on memorizing information. (Lannert and Halász, p. 95) Committing facts to memory is a necessary part of a student’s development, but it is also important that students be able to apply that knowledge in a broader context. Bálint Magyar addressed this topic at a conference in 2004 when he discussed the difference between an industrial society and a knowledge-based

society. In his presentation, Magyar argued that the focus of education needs to shift from “facts, data, [and] rules” to “skills and competencies” that will allow Hungarians to adjust to the continually changing job market. (Magyar, p. 6)

Despite the ambiguity of Hungary’s international survey scores, the country has made significant efforts to reform its educational system over the past two decades. As previously stated, Bálint Magyar has helped to expand the content of curricula to include more ICT and foreign language studies. However, Magyar has also observed that many Hungarian pupils are overwhelmed with excessive amounts of homework each day, inundated with some tasks that are essentially useless. (Spencer, p. 1) Most students work tirelessly, and many meet with private tutors after school to gain additional help with their studies because the workload is so demanding. This aspect of the educational system needs to be assessed to determine if some subject matter can be omitted to enhance the efficiency of the system without compromising educational quality.

## **Efficiency of the Educational System**

To determine the efficiency of public education, it is important to analyze the two primary components of the system: students and teachers. As mentioned in the introduction, “efficiency” in production means to produce effectively with a minimum of inputs or wasted resources. In this case, the goal of teachers should be to assign students the minimum amount of work that is necessary for them to learn key concepts. Based on students’ heavy workloads, it seems that this aspect of Hungary’s educational system is lacking efficiency. Since 2003, government officials such as Tamás Szabados — State Secretary at the Education Ministry — have been working to decrease the overall volume of the national curriculum. Teachers have often complained that the amount of information they are expected to teach is so extensive that they have no choice but to assign many hours of homework each night. As a result, the percentage of students that are forced to hire a private tutor is twice the OECD average, while the performance of Hungarian students is far below the OECD average. (Lannert and Halász, p. 91) The imbalance

between students' efforts and their performance on the PISA exam is a reflection of how academically inefficient the education system has become.

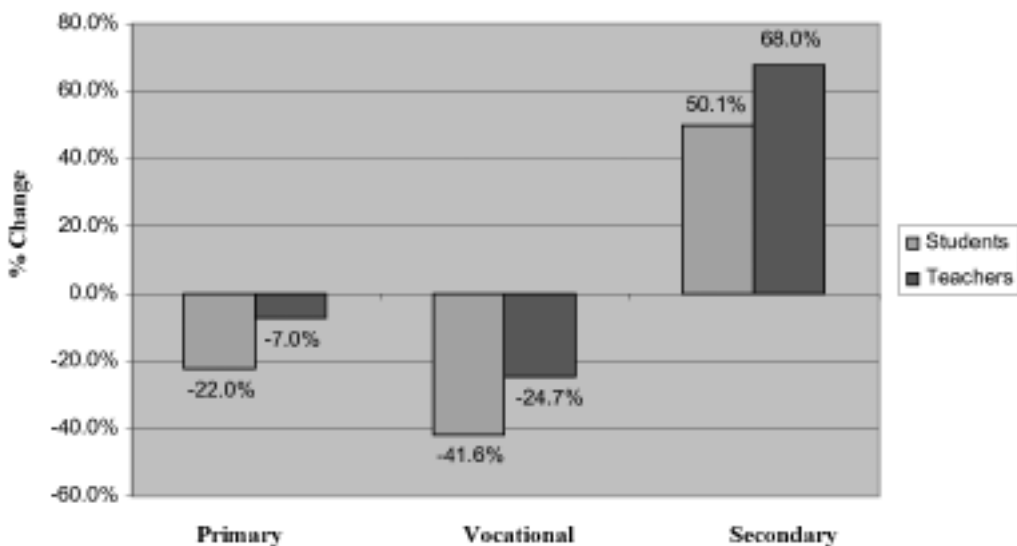
However, the extensive nature of the curriculum is only one of the factors that hinder Hungarian teachers' effectiveness in the classroom. According to some school heads and deputies in 2001/2002, the greatest challenge they faced was the lack of opportunities to motivate teachers. (Lannert and Halasz, p. 89) Many educators have become apathetic after fifteen years of low pay and the extra work that has resulted from countless government reforms. Even more importantly, the profession lacks accountability. In recent correspondence that I had with Anna Imre — an educational researcher at Hungary's National Institute for Public Education — she wrote that “at present there is no inspection system, nor an output oriented evaluation system in Hungary, and teachers rarely get feedback from evaluators or their own heads.” (Imre) In any profession, a lack of accountability eventually erodes personal motivation and performance.

From an economics standpoint, there is also an imbalance between the number of teachers employed and the number of school-

aged children in Hungary. According to a 2006 estimate, the fertility rate in Hungary is merely 1.3 births per woman, which is slightly below the European average rate of approximately 1.4. This equates to a Hungarian population decline of 0.25 percent per year. (*The World Factbook: Hungary*) Much like the rest of Europe, Hungary is experiencing a demographic crisis that has been marked by a decrease in the number of school-aged children in recent years. As this number falls each year, there should be a proportional decrease in factors of production (i.e., teachers), to maintain the efficiency of the educational system.

In a May 2005 interview, Bálint Magyar proudly stated that “in 1966 one teacher taught 25 students, now one teacher teaches 10.” (As quoted in Kiss, “Magyar: School Reform...,” p. 1) While this may appear to be a positive trend, it is actually a reflection of the great imbalance that exists between students and teachers in the Hungarian educational system. As seen on Figure 1 below, the percent decrease in the number of full-time primary school students (22 percent) over the last 14 years is far greater than the percent decrease in primary school teachers (7 percent). The same pattern exists when viewing vocational school statistics,

**Figure 1**  
**% Change in the Number of Students and Teachers: 1990-2004**



Source: Dr. Judit Lakatos, Hungarian Central Statistics Office.

where the number of full-time students has decreased by 41.6 percent, compared to a 24.7 percent decrease in the number of employed teachers. (Lakatos)

Despite Hungary's current demographic crisis, the number of full-time secondary school students and teachers has steadily increased over time. In 1995 the NCC extended the minimum length of general education from eighth grade to tenth grade, and a greater percentage of students are striving to finish secondary school and move on to higher education. (Kádár-Fulop, p. 2) Even in this educational sector, the number of teachers has increased at a greater rate (68 percent) than the number of students (50.1 percent) between 1990 and 2004. All of these sectors within the Hungarian educational system show evidence of a decreasing student-teacher ratio. Still, it is unclear that such a trend will inevitably cause the quality of education to improve. For example, Fred Naylor has observed that "the two most successful countries of all in PISA 2000 were Japan and Korea. The same two countries spent very much less per pupil by having the largest class sizes by a very wide margin." (Naylor, p. 4) With such a large number of teachers, it is no wonder that they continue to receive incomes that are as low as 10 to 15 percent below the average national wage. (Garcés et al., p. 361) The persistent teacher glut and the resulting low pay in Hungary have forced many educators to work multiple jobs and tutor children in their spare time to make ends meet.

Despite the large number of teachers in the workforce and the poor performance of students on the PISA exam, most Hungarians still feel that teachers deserve higher wages. However, this issue is complicated by the fact that their wages are tied to those of public workers; and raising the salaries of all public workers is a large commitment for local governments to undertake. Nevertheless, after the 2002 elections the central government took the enormous step of increasing public employee wages by 50 percent. Prior to the pay increase, Hungarian school teachers had earned the lowest salaries of teachers in all OECD countries, when adjusted for purchasing power parity. Although the central government authorized an increase in public employee wages, it is the local governments that are responsible for pay-

ing their public employees. By 2003, the 50 percent pay rise caused a 29–30 percent average increase in local government expenditures throughout the country. (Lannert and Halász, p. 48) The 50 percent pay increase has put the greatest burden on smaller, poorer communities that do not have vast resources to draw upon and cannot rely on voluntary parental contributions to the school system. Without downsizing the labor force in public education, the 50 percent salary increase will continue to burden taxpayers and compromise the cost-effectiveness of the system.

## **Equity of the Educational System**

By removing central authority over the educational system in 1993, parents in Hungary gained the right to choose which school their child would attend. Unfortunately, the system has been marked by regional disparities ever since, with schools in some parts of the country scoring significantly higher than others. In a February 2003 interview, Bálint Magyar stated that Hungary "had one of the most 'anti-democratic' education systems" of countries surveyed by the OECD in its 2000 PISA Report. To illustrate his point, Magyar stated that in Sweden "there were big differences between the performances of pupils within the schools," whereas in Hungary "the big differences were between the schools themselves." (As quoted by Spencer, p. 1) The most significant evidence of educational inequality lies in the contrasting performances of cities and villages on the PISA 2000 exam. As seen in Table 1 on the next page, 15-year-old students in large Hungarian cities performed significantly better on the PISA 2000 test than their peers in small villages. (Lannert and Halász, p. 127) The disparities between urban and rural scores in reading, mathematics, and science in Hungary were also far greater than the average differences for all OECD countries. Despite the fact that all of Hungary's averages are below those of the OECD, the PISA survey also showed that in countries such as Austria, Belgium, Germany, Poland, and Hungary, student performance also varies considerably across schools in different regions. (Watanabe, p. 26)

In Hungary, a student's access to a quality education is largely dependent upon the

**Table 1**  
**Average Scores in Hungary and OECD Countries on PISA 2000**

	Hungary			OECD Average		
	Reading	Mathematics	Science	Reading	Mathematics	Science
Villages with population below 3,000	359	365	371	481	482	480
Cities with population above 1 million	484	490	494	510	510	514
Difference	125	125	118	29	28	34

Source: Lannert and Halász, p. 127.

affluence of the community and the occupations of the parents. As shown above, the educational disparity between villages and cities is sizeable and can be attributed to variations in both human and capital resources. However, there are also significant differences between some local institutions in the same town or city. When the 1993 Public Education Act gave parents the right to choose which school their child would attend, the better schools began using entrance exams to determine which students would be admitted. In many cases, the children of well-educated parents with high incomes have a much better chance of gaining admission to such selective schools. As a result, communities with a high degree of income inequality have schools that are often “characterized by selectivity, the frequent use of entrance exams and by various forms of segregation.” (Lannert and Halász, p. 125) The PISA 2000 survey also shows that when students are segregated by their level of intelligence before the age of fourteen — as they are in such countries as Hungary, Germany, and the Czech Republic — their performance is highly correlated with the occupational status of their parents. Furthermore, the mean score of students in these countries is significantly lower in terms of reading literacy than in countries that do not use entrance exams. Therefore, it may be in Hungary’s best interest to stop segregating students at a young age and thereby create parity among schools.

Another factor that works against poor families is the widespread need for private tutoring in Hungary. As mentioned earlier, a

large number of students in Hungary require the assistance of a paid private tutor after school because they are overwhelmed with homework. In a 2002 survey of 2,700 students and their parents, 77 percent of tenth-graders in general secondary school regularly met with a tutor. (Lannert and Halász, p. 91) It is reasonable to argue that the connection between a parent’s occupation and his child’s performance on exams can also be attributed in part to one’s ability to pay for the services of a private tutor.

## Conclusion

Since the fall of communism, the Hungarian educational system has undergone an intense period of reform. Students are now receiving a more broad-based education that will better prepare them for jobs as Hungary transitions from an industrial society to a knowledge-based society. However, given the ambiguity of Hungary’s performance on international surveys, it is difficult to assess the quality of the educational system. In terms of both efficiency and equity, it seems clear that reforms need to be initiated. Students struggle to master the extensive curriculum and often seek the help of private tutors. Furthermore, teachers are not held accountable for their performance in the classroom, and the ratio of students to teachers is not cost-effective. Perhaps the most serious concern is the disparity in student performance among schools, which can be largely attributed to the use of entrance exams to segregate students at a young age. For Hungary’s educational system to become more cost-effec-

tive, it must continue to encourage technology and foreign language studies. Furthermore, it needs to cut expenses by reducing the number of employed teachers and eliminate entrance exams to provide students with equal educa-

tional opportunities. By doing so, Hungary will have a public education system that prepares students for higher education and for careers in a knowledge-based society.

## REFERENCES

- Aradi, Zsolt, Gábor Halász, and Judit D. Nagy. "Reforms in Education Financing," in *Public Finance Reform during the Transition: The Experience of Hungary*. Lajos Bokros and Jean-Jacques Dethier, eds. Washington, D.C.: The World Bank, 1998.
- Berend, Iván T. "On Education and the Economy." *European Education*, Vol. 35, No. 1, Spring 2003, pp. 54–57.
- Duru-Bellat, Marie and Bruno Suchaut. "Organisation and Context, Efficiency and Equity of Educational Systems: What PISA Tells Us." *European Educational Research Journal*. Vol. 4, November 3, 2005.
- "Education in Hungary." Ministry of Education: Republic of Hungary. Online. www.om.hu. Accessed September 15, 2005.
- "Empty Seats Spell School Closures." *Budapest Sun Online*. Vol. 11, Iss. 11, March 13, 2003. Online. www.budapestsun.com. Accessed November 12, 2005.
- Eurydice European Unit. "Structures of Education, Vocational Training and Adult Education Systems in Europe: Hungary 2003." June 2003.
- Garcés, Jorge, Francisco Ródenas, and Stephanie Carretero. "Observations on the Progress of Welfare-State Construction in Hungary, Poland, and the Czech Republic." *Post-Soviet Affairs*, Vol. 19, No. 4, 2003, pp. 337–71.
- Gazsó, Ferenc. "What Can the School Do?" *European Education*, Vol. 35, No. 1, Spring 2003, pp. 5–14.
- Goldstein, Harvey. "International Comparisons of Student Attainment: Some Issues Arising From the PISA Study." October 23, 2004. Online. www.mlwin.com. Accessed March 21, 2006.
- Hungary.HU – Government Portal. Online. www.magyarorszag.hu/angol/orszaginfo/allam/part/partook\_a.html. Accessed March 21, 2006.
- Imre, Anna. Personal electronic mail to the author, January 27, 2006.
- Kádár-Fulop, Judit. "Hungary." Online. www.ibe.unesco.org/curriculum/China/Pdf/IIIhungary.pdf. Accessed March 18, 2006.
- Kerber, Zoltán. "Teaching and Learning: Concerning Observational Research on School Subjects." National Institute for Public Education. Online. www.oki.hu. Accessed January 9, 2006.
- Kiss, Tamás S. "Magyar: School Reform Now in Full Swing." *Budapest Sun: Education Focus*. May 12–18, 2005, p. 1.
- Kiss, Tamás S. "Making the Most of the System." *Budapest Sun Online*. Vol. 11, Iss. 22, May 29, 2003. Online. www.budapestsun.com. Accessed November 12, 2005.
- Kiss, Tamás S. "Pay More Attention." *Budapest Sun Online*. Vol. 12, Iss. 10, March 4, 2004. Online. www.budapestsun.com. Accessed November 12, 2005.
- Kozma, Tamás. "Transformation of Education Systems: The Case of Hungary." *European Education*, Vol. 34, No. 4, Winter 2002–3, pp. 10–33.
- Kozma, Tamás and Gabriella Zsigovits. "Guest Editor's Introduction: Hungary: Recent Developments in Education." *European Education*, Vol. 34, No. 4, Winter 2002–3, pp. 4–9.
- Lakatos, Dr. Judit. "Regional Data of Education." Budapest; Hungarian Central Statistics Office, 2004. Online. www.portal.ksh.hu/pls/ksh/docs/hun/xftp/idoszaki/pdf/kozoktter03.pdf. Accessed October 25, 2005.
- Lannert, Judit. "Strategies for Reform and Innovation in Hungarian Public Education," in *Learning from Schooling for Tomorrow — Advancing the International Toolbox*. National Institute for Public Education. June 6–8, 2004. Online. www.oki.hu. Accessed February 24, 2006.
- Lannert, Judit and Gábor Halász. "Education in Hungary 2003." National Institute for Public Education, 2003. Online. www.oki.hu. Accessed January 5, 2006.
- Magyar, Bálint. "Constructivist Pedagogy As Opposed to Frontal Teaching." Presentation to 10th Netties 2004 Conference and Exhibition. Lecture presented October 27–29, 2004. Online. www.om.hu. Accessed March 24, 2006.
- Nagy, Mária. "Teachers." *European Education*, Vol. 35, No. 1, Spring 2003, pp. 15–26.
- Naylor, Fred. "OECD: The Trojan Horse Within: Short History of the OECD and Its PISA Activities." *Current Concerns*. January 26, 2004. Online. www.currentconcerns.ch. Accessed March 22, 2006.
- OECD Proceedings. *Towards Lifelong Learning in Hungary*. Phare Program, 1999.
- Pál, Beáta. "Learning Curve of Education." *Budapest Sun Online*. Vol. 8, Iss. 49, December 7, 2000. Online. www.budapestsun.com. Accessed October 18, 2005.
- Prais, S.J. "Cautions on OECD's Recent Educational Survey." *Oxford Review of Education*, Vol. 29, No. 2, 2003.
- Radó, Péter. "The System of Content Regulation in Hungary." National Institute for Public Education, September 2003. Online. www.oki.hu. Accessed March 24, 2006.
- Saska, Geza. "The Age of Autonomy." *European Education*, Vol. 34, No. 4, Winter 2002-3, pp. 34–55.

## REFERENCES (CONTINUED)

- Spencer, Sarah. "Minister Tackles New Education Challenges." *Budapest Sun Online*. Vol. 11, Iss. 7, February 13, 2003. Online. [www.budapestsun.com](http://www.budapestsun.com). Accessed November 12, 2005.
- "Survey of Student Achievement 2000." Online. [www.statistics.gov.uk/ssd/surveys/survey\\_student\\_achievement.asp](http://www.statistics.gov.uk/ssd/surveys/survey_student_achievement.asp). Accessed April 2, 2006.
- "Top-Performer Finland Improves Further in PISA Survey as Gap Between Countries Widens." Organisation for Economic Co-operation and Development. June 12, 2004. Online. [www.oecd.org](http://www.oecd.org). Accessed January 29, 2006.
- Turner, Adair. "Aging Gracefully: The Population Balancing Act." *Global Agenda Magazine*, 2006. Online. [www.globalagendamagazine.com](http://www.globalagendamagazine.com). Accessed February 15, 2006.
- Watanabe, Ryo. "Learning for Tomorrow's World: First Results from PISA 2003." Organisation for Economic Co-operation and Development, 2004.
- Watanabe, Ryo. "School Factors Related to Quality and Equity: Results from PISA 2000." Organisation for Economic Co-operation and Development, 2005. Online. [www.pisa.oecd.org/dataoecd/15/20/34668095.pdf](http://www.pisa.oecd.org/dataoecd/15/20/34668095.pdf). Accessed January 11, 2006.
- The World Factbook: Hungary*. Online. [www.cia.gov](http://www.cia.gov). Accessed November 13, 2005.