

## Comparative Analysis of Educational Systems of American and Japanese Schools: Views and Visions

*by Craig C. Wieczorek*

That free government rests, as does all progress, upon the broadest possible diffusion of knowledge, and that the Commonwealth should avail itself of those talents which nature has sown so liberally among its people by assuring the opportunity for their fullest development by an effective system of education throughout the Commonwealth.

—Thomas Jefferson, 1779

Erasmus once said, “The main hope of a nation lies in the proper education of its youth.” Knowing the great impact education has on a nation, I decided to investigate the education systems in America and Japan. In May 2006, I was able to observe and work with Japanese students, teachers, and administrators through the University of Toledo’s Study Abroad Program. The aim of the study was to answer how educational systems or practices in Japan and America differ, and how Japanese practices might improve those of American educators and administrators.

Besides many similarities, there are striking contrasts between American and Japanese views and visions of education, and they point to quite different directions and paths of reform in the two nations. While Americans are busy constructing common standards and benchmarks, developing and using more standardized tests for all students, and moving toward standards-based school reform, the Japanese seem to desire just the opposite—deconstructing uniform standards, moving away from the pressures of national exams, and focusing more on the interests and potential of each student, a goal that has often been ignored in Japanese culture and schools.

## Education in the United States

Education in the United States is provided mainly by the government, with control and funding coming from three levels: federal, state, and local. At the primary and secondary school levels, curricula, funding, teaching, and other policies are set through locally elected school boards with jurisdiction over the school districts. School districts can be, but are not always, associated with counties or municipalities. Educational standards and standardized-testing decisions are made by the states through acts of their legislatures and governors, along with their state departments of education.<sup>1</sup>

Schooling is compulsory for all children in the United States. Most children begin primary education with kindergarten at age five or six, depending upon the eligibility requirements in their districts, and complete their secondary education at age eighteen or when their senior year of high school ends. Some states allow students to leave school at age sixteen, before finishing high school, while other states require students to stay in school until age eighteen.

Approximately 85 percent of U.S. students enter the public schools largely because they are “free”—in other words, supported by taxes that local school districts levy. According to government data, approximately 10.4 percent of all students enrolled in compulsory education attend private schools. Most students attend school around eight hours per day, usually 175 to 185 days per year. Most schools have a summer “break” for about 2½ months from June to August.<sup>2</sup>

Parents may also choose to educate their children at home. In fact, 1.7 percent of children are home schooled.<sup>3</sup> The rationales are many: maintaining moral or religious systems; individualizing curricula, especially for those with learning disabilities; and avoiding negative social pressures. Home-schooling parents often form groups to help one another, and may even assign classes to different parents, similar to teaching assignments in public and private schools.

Overall, the U.S. literacy rate, estimated at 97 percent by the United Nations, shares the number-one ranking with twenty other nations.<sup>4</sup> More than 76.6 million students are enrolled in nursery school through undergraduate study. Of those, 72 percent ages twelve to seventeen were judged academically “on track” for their age. Among the country’s adult population, more than 85 percent have completed high school and 27 percent have received bachelor’s degrees or higher. (The latter group’s average beginning salary is \$42,712, compared to beginning teachers’ average of just below \$29,000.<sup>5</sup> However, the nation’s reading literacy rate, defined as students’ abilities to “understand complex texts, evaluate information and build hypotheses, and draw on specialized knowledge,” is low compared to other developed countries, at 86 to 98

percent of the population over age fifteen, and its science and mathematics proficiency also ranks below average.<sup>6</sup> This mediocre performance has pushed the private and public school systems toward standards-based assessments through the federal No Child Left Behind Act of 2001. In addition, the ratio of college-educated adults entering the workforce compared to the general population (33 percent) is slightly below the mean of the developed countries (35 percent), while the rate of labor-force participation in continuing education is high.<sup>7</sup>

## Education in Japan

Education in Japan is a national, prefectural (provincial), and municipal responsibility. The Ministry of Education, Culture, Sports, Science, and Technology (known as *Monbukagakusho*, MEXT, since 2001) oversees dozens of internal study groups that evaluate methods of education and provide guidance, advice, and funding to the prefectural governments based on research from the National Council on Education Reforms.<sup>8</sup> In the past, such “guidance” and “advice” have been followed closely, and deviations from them resulted in budget cuts and other difficulties. In short, the national government bears one-third to one-half the cost of education in the form of teachers’ salaries, school construction, the school-lunch program, and vocational education and equipment.<sup>9</sup>

Recent reforms have given more power to the prefectural governments. The MEXT also reviews textbooks to see that they are neutral in their points of view and include correct information according to grade levels. One of the important points of recent reforms is that in the past, the MEXT decided what information to include in textbooks, whose minimal information often failed to provide students with deeper understanding. However, today the MEXT sets only minimum standards for textbook content. In effect, schools can now use textbooks and supplementary textbooks not directly approved by the MEXT.<sup>10</sup>

Every prefectural government has its own board of education that offers guidance, advice, and funding for the prefecture’s public and private schools. This board has a variety of responsibilities including, but not limited to, choosing textbooks, hiring teachers, and, along with the governor, drawing up the budget. Both the MEXT and the prefectural government provide guidance to municipal governments, whose own boards of education likewise guide local schools.<sup>11</sup>

Education is compulsory and free for all schoolchildren from the first through the ninth grades. According to government data, well over 90 percent of students attend public schools from kindergarten through the ninth grade, but more than 25 percent of students attend private high schools. Between 75 and 80 percent of all Japanese students enroll in university-preparation tracks.<sup>12</sup>

The Japanese school year begins on April 1 and ends on March 31 of the following year. Schools use a trimester system separated by vacation breaks. In the past, children attended school five full days and one half-day on Saturday. However, since 2002, students have attended school only five days a week, and Saturdays are “free days,” known as *yutori kyoiku* (“unhurried education”), for pursuing optional academic or extracurricular activities.<sup>13</sup> Many teachers coach on weekends, and their presence is required during summer vacation, usually the month of August. The school year has a legal minimum of 210 days, but most local school boards add about thirty more days for school festivals, athletic meets, and ceremonies with nonacademic educational objectives, especially those encouraging cooperation and school spirit. With allowance for the time devoted to such activities, the number of days devoted to instruction is close to 195 per year.<sup>14</sup>

Japan’s greatest educational achievement is the high-quality basic education most young people receive by the time they complete high school. Recent statistics indicate that well over 95 percent of Japanese are literate, which is particularly impressive since Japanese is one of the most difficult languages to read and write. More than 95 percent of the Japanese population graduates from high school. Some Japanese education specialists estimate that the average Japanese high school graduate has obtained about the same level of education as the average American after two years of college.<sup>15</sup> More than 2.5 million students advance to universities and colleges.<sup>16</sup>

Japanese employees of large companies and government ministries rank among the best-educated workers on earth.<sup>17</sup> Teachers are accordingly well compensated. According to the Organization for Economic Co-operation (OECD), the average teacher salary for fifteen years’ experience in upper-secondary education is 4,977,782 yen per year (\$42,820 USD). In addition, teachers are eligible for many types of special allowances and bonuses (paid in three installments), which amount to about five months’ salary, and periodic improvements are made in salaries and compensation. Teachers also receive the standard health and retirement benefits available to most salaried workers.<sup>18</sup>

At the same time, the academic achievement of Japanese students is high by international standards. In successive international tests among thirty-one developed nations, Japanese children have consistently ranked first in mathematics literacy and second in science literacy. In 2000, the OECD’s Program for International Student Assessment (PISA) for fifteen-year-olds determined that the number-one performers were Finland, Japan, and Korea, respectively. Japan also ranked above average in reading literacy.<sup>19</sup>

## Similarities and Differences

Worldwide, illiteracy has greatly declined in the past several decades. In fact, the percentage of the population without any schooling decreased from 36 percent in 1960 to 25 percent in 2000. Among developing countries, illiteracy and percentages without schooling in 2000 stood at about half the 1970 figures.<sup>20</sup> However, the OECD's 2000 PISA report revealed some glaring distinctions in student performance. Most notably, the study found a larger variation in achievement among students from different schools and socioeconomic groups in the United States than in most countries. U.S. scores also registered performance gaps along racial and ethnic lines. The PISA study found that white and "other" fifteen-year-olds (including Asians, American Indians/Alaska Natives, Native Hawaiians or Pacific Islanders, and multiracial students) outperformed black and Hispanic students in reading, mathematics, and science literacy.<sup>21</sup> However, the study did not ascertain differences between American and Japanese classrooms.

Even though the Japanese adopted the American 6-3-3 model (six years elementary; three years middle; three years secondary) during the U.S. occupation following World War II, there are marked similarities as well as differences among both education systems.

### *Similarities*

*Focus on Education.* Both the United States and Japan remain strongly committed to educational pursuits. Correlating education with socioeconomic and political viability, both countries fund academic achievement liberally and provide additional resources. Thus, national success is associated with individual success.

*Structure of Education.* Organizationally, both the United States and Japan address education as a joint responsibility of the nation, the states or prefectures, and localities. Both countries have federal agencies for oversight, i.e., the U.S. Department of Education and the MEXT (the Japanese ministry of education). Both countries retain state or prefectural responsibility in state departments of education and prefectural boards of education, which provide guidance to individual school districts (United States) and municipal boards of education (Japan).

*Compulsory Education.* In both the Japanese and American systems, schooling, either public or private, is mandatory, and it varies in both countries. In the United States, most children begin primary education with kindergarten (age five or six) and, depending on the district requirements, complete their education in the senior year of high school (age eighteen). Some states allow students to leave school at age sixteen, before finishing high school. In Japan, most children's primary education begins in the first grade, although parents typically send their children to

kindergarten as well.<sup>22</sup> Students are required to attend classes until the ninth grade in lower-secondary school (age fifteen).

*Student Attendance.* Since 2002, Japanese students have attended school five full weekdays like their counterparts in the United States; they have the weekends for personal activities. Both countries provide summer vacations and breaks from academic pursuits. Calendars vary depending on the local school boards.

*Curricular Requirements.* Both countries provide students with a specific plan of study, and students are required to complete a core of subjects. Literacy is measured in reading, mathematics, and science content. Since 1995, both countries have participated in the Trends in International Mathematics and Science Study (TIMSS) assessment to measure student achievement in mathematics and science. This international assessment has produced a vehicle that measured both fourth- and eighth-grade performances in thirty-seven developed countries in 1995, 1998, and 2003.<sup>23</sup> The results show trends in which countries can adjust their educational focus.

*Extracurricular Activities.* Students in both Japan and the United States participate in activities outside academic responsibilities. Students enjoy sports, band, clubs, academic groups (*juku*), and pop culture such as video games, cell phones, and Internet communication.

*Teacher Requirements.* Both Japanese and American schools are committed to employing highly qualified professional staff. Teachers in both countries are required to pass prefectural- or state-level examinations to receive licensing by prefectural or state boards of education. Teachers in both countries are required to participate in professional development activities.

In 1989, Japan's teachers union (*Nihon Kyosbokuin Kumiai—Nikkyoso*) adopted a new system of teacher training. The new system required new teachers to work under the direct supervision of master teachers and increased the number of both in-school and out-of-school training days and the time for new teachers' probationary status.<sup>24</sup> Teachers must seek certification renewal. In May 2006, the NHK (*Nippon Hōsō Kyōkai—Japanese Broadcasting Corporation*) reported that new teachers would have to renew their licenses every ten years.<sup>25</sup> This is a notable departure from previous licensing policies, which allowed licensed teachers to teach throughout their careers without license renewal.<sup>26</sup> (In Ohio, by contrast, new teachers must renew their licenses every five years.) However, both countries require teachers to complete their training at four-year postsecondary institutions and to attend prescribed professional development throughout their careers.

*Student Attitudes.* There are important similarities between Japanese and American student attitudes. Although most students

enrolled in education are actively engaged in their education, there is evidence, as in many countries, of growing concern with discipline. (According to the OECD in 2000, “More than one in four students in twenty of the twenty-eight OECD member countries surveyed consider school a place where they do not want to go.”<sup>27</sup> Even though student attitude is not an automatic performance determinant, there is still a strong relationship between student attitude and results. In recent years, studies have shown that while Japanese students are highly motivated, there are common problems: loss of interest in school; school-refusal syndrome; and school violence.<sup>28</sup> In several Japanese junior high classrooms, the writer witnessed both boys and girls with their heads on their desks, most noticeably during English and social studies classes—not unlike scenes that can be witnessed in the schools of Toledo, Ohio.

### *Differences*

*Education Requirements.* Although both Japan and the United States mandate compulsory education, Japan’s entrance examination system exerts strong influences throughout the entire system. Students are required to pass a rigorous entrance examination to enter upper-secondary school (grades ten through twelve), which takes in nearly 94 percent of those who complete lower-secondary school.<sup>29</sup> High school graduates must pass another, more-difficult entrance examination, from which 33 percent advance to a four-year university, two-year junior college, or other postgraduate institution.<sup>30</sup>

*Curricular Requirements.* Although both Japan and the United States attend to curricular requirements, Japan’s national curriculum exposes students to a “balanced and basic education” known for its equal treatment of students.<sup>31</sup> The United States has no national curriculum; instead, individual state boards of education set statewide curricula. Students do not specialize in a narrow field of study until the second year of college at the earliest. However, some schools encourage students to take electives in areas of career interest. Generally, U.S. high school students take a broad variety of classes without special emphasis. If academic content in Japanese schools is “narrow and deep” in understanding, its U.S. counterpart is “wide and shallow” in content dissemination. That in turn has instructional ramifications. The curriculum varies in quality and rigidity. Some states consider 70 (on a 100-point scale) passing, while in others a passing grade can be as low as 60 or as high as 75.

An ongoing issue is student creativity, flexibility, or individual expression. Critical thinking is not a concept that has been highly valued in Japan. Japanese students are regimented and geared toward perseverance and self-discipline. A saying that sums up this one-for-all belief is “the nail that sticks out gets hammered.”<sup>32</sup> Thus, students are generally

instructed to memorize the text on which they will be tested, resulting in high test scores that do not test students' ability to use the data. For instance, since 1987 the MEXT has required three years of English-language training.<sup>33</sup> However, Japanese schools offer no remedial or "honors" classes; students must enroll in *jukus* ("cram schools"), specialized academic groups that meet after regular school hours. Half of all compulsory school-age children attend academic *jukus*, which offer instruction in mathematics, Japanese language, science, English, and social studies.<sup>34</sup> Last, curricular requirements affect the academic calendar. Students in the United States spend about eight hours per day on academic pursuits an average of 180 days per year; Japanese students spend on average four to six hours more per day in 210 days each year, even though they are assigned less homework than their U.S. counterparts.<sup>35</sup>

*Education Administration.* There are important differences between Japanese and American teachers and administrators. Japanese schools employ a more collegial system of "high-quality" instruction and learning.<sup>36</sup> Students are required to wear school uniforms from elementary to high school. Japanese students are never "referred" to the principal for bad behavior; rather, teachers communicate with the parents.<sup>37</sup> Japanese schools employ one principal and one assistant principal or "headmaster" teacher, who is active in the classroom as well. Both are appointed by the prefectural board of education.<sup>38</sup>

In 1987, the government introduced the Japan Exchange and Teaching (JET) Programme in an effort to improve foreign-language teaching. Nearly half of the approximately six thousand Assistant Language Teachers (ALTs) and Co-ordinators of International Relations (CIRs) teaching English in 1999 were American teachers working with Japanese teachers and students in their English-language training. They are employed by prefectural boards.<sup>39</sup> Japanese students are now required to study English in lower-secondary school (grades seven through nine).

Japanese schools employ very little nonteaching staff and provide no public transportation for students. Students often walk or ride bicycles to and from schools or activities. Rather than operate cafeterias, schools maintain kitchens. Students take turns picking up the prepared meal for the day and serving fellow students in their homeroom classes. They wear protective masks and arm protectors to prevent passage of germs or bacteria, then return the used bowls and remaining food to the kitchen. Every school maintains a strong recycling program: all recyclables are separated before they are returned to the kitchen. (Students stay in the same homeroom throughout the academic year, a practice that fosters teamwork and pride in their school.<sup>40</sup>) Schools employ one nurse and one janitor. Students are responsible for the cleanliness of the school

and the grounds after classes have concluded. In such ways, Japanese schools foster a strong moral education and character development.

The average class size in Japan ranges between thirty-five and forty-five students, while the average American class size is twenty-five to thirty. Most classrooms in Japan lack computers and overhead projectors, although some have televisions with video equipment attached. Teachers do have access to the Internet, but it is not utilized for student instruction.<sup>41</sup>

At the time of this writing, it was observed that homeroom teachers are required to visit homes after school to meet with parents, build good relations, and communicate students' strengths and weaknesses to parents. Parental involvement is strongly associated with the students' success. Thus, whole-class instruction and a comprehensive approach seem to play a large role in the Japanese students' academic success. In contrast, American schools are highly fragmented in their approach to student success. An authoritarian structure with a large staff of specialists fosters student isolation and a negative climate through standardized testing. American schools lack a comprehensive and nurturing approach to education; instead, American administrators focus on supporting initiatives that accommodate learning disabilities and special needs for students.<sup>42</sup>

*Student Attitude.* There are important differences between Japanese and American student attitudes. Japanese students are highly motivated; they continually strive to reach the top in any activity they choose—academics, sports, or band. Often the difference is in the teachers. In Japan, teaching remains an honored profession, and teachers' high social status stems from the Japanese culture and public recognition of their important social responsibilities. Formal classroom moral instruction, informal instruction, and even academic classes are all viewed as legitimate venues for this kind of teaching.

Whole-class instruction seems to offer greater motivational support than tracking or drilling. Students work together on the same material at the same pace; no one is left out. Teachers emphasize effort over ability (perseverance); engage students (thinking of as many ways to solve the problem as possible); build strong classroom relationships (correct social interaction); and unify the classroom (class goals). Teachers committed to student success work to develop a curriculum that cultivates a culture of learning. It is well documented that Japanese teachers are better educated and prepared to teach mathematics than are their U.S. counterparts. Japanese mathematics teachers' lesson plans are more complex and engage the student in developing cognitive structure in mathematics.<sup>43</sup>

## Conclusion

Numerous comparative studies have attempted to determine how Japanese educational systems or practices differ from American systems or practices, and how the education system or practices of Japan can improve those of American educators and administrators. In the final analysis, however, the one compelling characteristic of Japanese education is student achievement. Therefore, the last question to answer is: What aspect of the Japanese education system is most conducive to molding student success?

This study suggests that Japan's education system enables teachers to motivate student learning through a well-rounded national curriculum, closely integrated through all subjects, that engages students and builds strong classroom relationships. In addition, a narrower curricular focus fosters a deeper understanding for students. Whole-class instruction helps Japanese schools motivate their students by emphasizing effort over ability, engaging students, building strong classroom relationships, and unifying students under a common goal.<sup>44</sup> Parental involvement is crucial. In fact, parents usually start their children in pre-school activities leading to formal instruction on piano or other musical instruments, swimming or soccer, abacus, or a combination of activities that develop motor skills during the elementary years. Children are also encouraged to start English-language training as early as five or six years old in private schools, even though they are not required to begin formal training until the lower-secondary schools (grades 7-9).<sup>45</sup>

Because Japanese adolescents participate in school-related activities such as school clubs or supplemental *juku* classes after school, they develop an attachment to school values and build support through strong school-based friendships in these activities. Collegial management of student and teacher interactions in Japanese schools helps to create a positive environment that builds motivation. Thus, it is apparent that Japanese educators have "sought to create a 'new' model of education that will not only meet their needs for the twenty-first century, but will serve as a model from which the rest of the world might learn."<sup>46</sup> Although some Japanese students have motivation problems, the Japanese recognize that the remedy lies in expanding motivation-building principles.

In the end, average will not be good enough for American children.

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*Craig C. Wieczorek is a graduate student in the Department of Foreign Languages, University of Toledo.*