

LEARNING FROM  
SOUTH  
KOREA

● CO-SPONSORED BY THE PUBLIC SCHOOL FORUM AND THE NORTH CAROLINA CENTER FOR INTERNATIONAL UNDERSTANDING AS PART OF THE INTERNATIONAL STUDIES PROGRAM.



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Learning from South Korea  
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## ITINERARY

<b>Fri, Nov 8</b>	Depart North Carolina
<b>Sat, Nov 9</b>	Arrive Seoul
<b>Sun, Nov 10</b>	Visit historic and cultural sites
<b>Mon, Nov 11</b>	Introduction to Korean Education, Ewha Women's University Visit to Korean Ministry of Education The Process of Educational Reform in Korea
<b>Tues, Nov 12</b>	Visits to Ewha Elementary School, Yonhi Middle School, Seoul Science High School, Seoul Demonstration Middle School, and Jong Ro M School
<b>Wed, Nov 13</b>	Visits to Ahyeon Middle School and Chungdam High School Visit Korean Education Development Institute Discussion of Teacher Training, Ewha Women's University Thanksgiving Charity Dinner, Ewha Women's University
<b>Thurs, Nov 14</b>	Visits to Korean Institute of Curriculum and Development and Korean Research Institute for Vocational Education and Training Discussion of Education Issues with Dr. Huh Unna, the National Assembly Group Debriefing
<b>Fri, Nov 15</b>	Tour of the Demilitarized Zone (DMZ) Concluding Dinner hosted by The Korea-United States Exchange Council
<b>Sat, Nov 16</b>	Depart for North Carolina



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## FOREWORD...

“Learning from South Korea” is the fourth in the series of reports that record what delegations of North Carolina business leaders, educators and policymakers have discovered from investigations of schools in other countries.

Previously issued reports focused on school choice plans in Great Britain, approaches to dealing with diversity and the teaching of mathematics in The Netherlands and long-range planning and teacher preparation in Japan.

The studies of education in other countries have been the result of a collaboration between the Public School Forum’s Institute for Educational Policymakers and the North Carolina Center for International Understanding (NCCIU), a public service of The University of North Carolina. The International Studies Program has been made possible through the generous financial support of the Burroughs Wellcome Fund and the Kenan Charitable Trust.

There is obviously a limit to how much a delegation from the United States can learn from a brief visit to other countries. However, each delegation, including that which traveled to South Korea, prepares for their investigation of education by

undergoing three intensive days of briefings and by reading material about the history, culture and schools of the country being examined. The South Korea delegation was extremely fortunate in that the quality of those who presented during the briefings was especially high. Presenters included:

- Former United States Ambassador to the Republic of Korea Dr. Richard Walker. Dr. Walker is Distinguished Professor Emeritus and Ambassador-In-Residence at the University of South Carolina and remains connected to South Korea through the Korea-United States Exchange Council and in other ways.
- Ms. Namji Steinemann, Director of AsiaPacificEd Programs for Schools, East West Center, in Hawaii, and former Vice President of the Education Division of the Asia Society, New York City, provided a unique perspective having attended Korean schools through middle school before her family immigrated to North Carolina.
- Dr. Hae-Young Kim, Assistant Professor of Korean Language at Duke University

A panel of Koreans who were educated in South Korea but who

now are working in the United States and have school-aged children enrolled in North Carolina schools gave the delegation an introduction to the role of parents in education in South Korea. The panel included:

- Dr. Sinjae Hyun, a member of the faculty of North Carolina State University’s School of Engineering
- Mr. Dong-Sup Kim and Mr. Pyeong Soo Choi, visiting South Korean journalists at Duke University’s Asian/Pacific Studies Institute

The study of schools in South Korea culminated with the delegation visiting schools, governmental officials and Ewha Women’s University. The faculty from Ewha Women’s University International Education Institute organized the program.

The report that follows is the culmination of six-months of study about South Korea and its schools. Upon return, the delegation reassembled for a full-day debriefing and attempted to reach a consensus on what had been learned through the study of South Korea’s educational system and, more importantly, what lessons learned could strengthen the schools of North Carolina.



## SOUTH KOREA IN TROUBLED TIMES...

It is difficult to write about South Korea in 2003 without writing in the context of current events, the branding of North Korea as a member of the “axis of evil,” nuclear saber rattling and a growing resentment of the United States in South Korea. The North Carolina delegation arrived in Korea on the heels of a tragic incident in which two young Korean girls had been killed after being struck by United States soldiers in an army jeep. And the delegation arrived only months after President Bush labeled Iran, Iraq and North Korea as the axis of evil in his 2002 State of the Union Address.

It must be noted that while the papers were full of accounts of demonstration and reactions, mostly negative, to President Bush’s comments or to the presence of United States soldiers in South Korea, the North Carolina delegation was treated warmly throughout the study of South Korean education, whether in schools, in meetings with governmental officials or walking the streets of Seoul.

The delegation was prepared through briefings held in advance of the trip to South Korea. The first time the group assembled almost all members of the delegation admitted that their perceptions of Korea were largely gained, for the more “elder” in the group, by memories of the Korean War as seen through documentaries or movies. For the “younger” members of the delegation, perceptions were largely framed by the long-running television series *MASH*. Only one member of the delegation, a former army officer, had been to Korea before, and he had spent most of his time during that visit observing military exercises in the Demilitarized Zone (i.e., the DMZ).

As the pre-trip briefings progressed, it became clear that while Americans see the Korean Peninsula as divided between North and South, Koreans fervently believe it is only a matter of time until the Korean Peninsula will again be one nation, one family of people who have endured a long

and, at times, painful history that has knitted them together as one people. Simultaneously many South Koreans also recognize the enormous financial burden which reunification would pose.

The recently elected President of the country ran on a pro-unification platform and has assumed office committed to accelerating the slow steps being taken to open up the border that has divided the two nations for fifty years. North and South Korea, for instance, are jointly building a railroad that will open up rail lines across the DMZ for the first time since the Korean War ended in 1953. A road enabling tourists to travel across the DMZ to visit one of the best-known tourist destinations in North Korea recently opened, another historic moment. The countries are permitting exchanges of athletes and musicians. To the rest of the world these might seem like small steps; to the Koreans they are the beginning of what they believe will be the inevitable reunification of the nation.



## SOUTH KOREA: ONE OF THE PACIFIC'S ECONOMIC TIGERS

The obstacles to reunification are formidable. While the delegation had been briefed on South Korea's "economic miracle," nothing could have prepared the group for the degree to which Seoul, the capital and heart of South Korea, is a vibrant, urban megalopolis. Skyscrapers and high rise offices line both sides of the Han River that separates the historical inner city of Seoul from what is now its "miracle mile," an area that is bristling with cranes used to build multi-story buildings and includes shopping areas that would rival New York's Fifth Avenue for designer stores and boutiques.

Nearly 20 million people live in the metropolitan area surrounding Seoul, almost one-half of South Korea's 47 million people. What is difficult for a first-time visitor to comprehend is that the city is truly a new city, rebuilt only since the Korean War ended in 1953. The city was ravaged during the fighting and twice was occupied by North Korean forces. People who lived through that period of time recount stories of entire city precincts being flattened, people burning fires in the streets to stay warm, and thousands dying and wounded as a result of bombing and combat in the city streets.

Today, there are large, ornate temples, but many have undergone massive reconstruction due to damage suffered during the war. If a visitor to Seoul goes expecting bucolic scenes similar to those seen on wood carvings of ancient Asia, he/she will be disappointed. The city is as modern as modern can be.

Fueling the rebuilding process was an economic plan similar to the one developed in Japan after WWII ended. South Korean governmental officials became the drivers of economic development. Companies selected to be foundation blocks during the rebuilding process are today household names – Hyundai and Samsung, to name but two. Facts about the economy underscore the degree to which it is booming:

- South Korea is the world's second largest maker of large ships and tankers.
- South Korea is the world's fourth largest manufacturer of cars.
- South Korea's exporting revenue, when compared to other Asian countries, is only exceeded by Japan and China.
- South Korea is the world's most thoroughly "wired" nation with access to high speed internet wires even in its rural areas.

### North Korea: A Struggling Economy

In contrast to the economic success of South Korea, the *New York Times* recently ran a feature on the economic travails of South Korea's neighbor to the North. The article included a satellite photograph of the Korean Peninsula taken at night. The southern portion, South Korea, had bright clusters of dots indicating population centers at night; in contrast, the northern portion of the peninsula, North Korea, was almost completely dark. The lack of electricity is only one of the factors that prevents North Korea from reaping the benefits of a developed economy. North Korea is a small country with only one-half the population of the South, roughly 22 million. The population has declined in recent years due to famine and the lack of opportunity. Run by a dictatorship, North Korea has not embraced modernization, and the bulk of the government's revenue goes to supporting the world's largest standing army, estimated to be over 1 million strong. Supporting that military force has come at a price; the economy of North Korea is third-world like, in contrast to the South.



## EDUCATION AND VISION: AT THE HEART OF SOUTH KOREA'S ECONOMIC MIRACLE

A former South Korean President, considered the father of the economic turnaround of war-torn Korea, made what have proven to be far-sighted decisions that laid the foundation for the rebuilding of a nation. He accepted the fact that South Korea was resource poor and would not build an economy around indigenous mines or agriculture. Key to the discussion of education, he believed that Korea must build on its greatest resource – people. And to build that people resource, he believed education would be a key to South Korea emerging from the devastation of the Korean War.

The rapidity with which South Korea transformed its educational system is a testament to the energy of the nation. In describing the energy which Koreans exhibit, a former United States Ambassador to Korea, Richard Walker, said, "They may be the only people in the world who make the Japanese look lazy." That energy was certainly evident in the way in which Korea approached education. In the forties and fifties, South Korea's literacy rate was very low – only 25% of the men and 20% of the women were literate. By 1959, 96% of South Korea's school aged children were enrolled in school. Today the high school graduation rate hovers in the mid-nineties and South Korea's going-to-college rate is fully 64%.

Korea showed that same energy when it began rebuilding its economy – a task made even more difficult because, for all practical purposes South Korea is an island, occupying the lower end of a peninsula divided by a virtual no man's land, the DMZ. It is reliant on the outside for materials and goods and is resource poor. It has focused on key industries, shipbuilding, automobile manufacturing, technology... and providing its people a world-class education.

As one Korean official put it, "We are a shrimp between two whales (i.e., China and Japan) and to succeed we must be the best at some things. We want Samsung to be better than SONY; we want Kia to be better than Toyota and we want our children to be the best educated in the world." And they appear to be succeeding beyond anyone's wildest imagination. Economists studying the success of Korea's economy attribute 50% of its growth to education and the quality of its workforce.

For Americans, the place that education occupies in South Korea's culture is difficult to comprehend and to even begin to understand it one has to consider the difference between a Confucian culture and that of modern-day America. For centuries education has been the dividing

line between Korea's elite and the masses. Korea adopted a meritocracy approach to civil service long ago and those who moved up the ladder of government were those who excelled on examinations that measured their knowledge, their grasp of history and their language skills. Moreover, Confucianism holds authority in respect. A Korean adage says, "One should never walk even on the shadow of a child's teacher." Teaching and teachers are held in great regard in Korea.

There is, however, another side to the Confucian culture. Responsibility hangs heavily on the shoulders of the young people in Korea. To honor one's family one is expected to excel in education. Upholding one's obligations to others is a driving force in Korea.

Thus, if a student does poorly at school it is a negative reflection on his parents, his extended family, his school and his community. Conversely, if a student does well it is a great source of pride for his parents, his school, and his community.

As will be seen later the pressure to do as well as possible, to bring honor on one's family and schools is a driving force in the schools in South Korea.



## South Korea's Standing on International Exams

Given the place education occupies in Korea's culture it is not surprising that the nation does well when South Korean students are compared to students around the world. In recent years, South Korean students have consistently been in the top three in assessments of mathematics and

science skills. In recently released examinations they also are very high in international reading comparisons.

That is what led to the Forum and NCCIU's International Studies Program opting to examine Korean schools. The goal of the delegation was to attempt to identify the major differences between our systems and to look for transportable ideas that could be incorporated into North Carolina's schools.

## Parental Drive & Time: Keys to Korea's Education Success

In briefings prior to the trip to South Korea, the North Carolina delegation had heard an expression used by a member of a panel of Korean-educated men who are now working in the Research Triangle. One said that, "In Korea we say that if you're (i.e., a student) sleeping more than

### 1999 TIMSS MATHEMATICS RESULTS

Rank	Nation	Average	Rank	Nation	Average
1	Singapore	604	20	England	496
2	South Korea	587	21	New Zealand	491
3	Chinese Taipei	585	22	Lithuania	482
4	Hong Kong SAR	582	23	Italy	479
5	Japan	579	24	Cyprus	476
6	Belgium-Flemish	558	25	Romania	472
7	Netherlands	540	26	Moldova	469
8	Slovak Republic	534	27	Thailand	467
9	Hungary	532	28	Israel	466
10	Canada	531	29	Tunisia	448
11	Slovenia	530	30	Macedonia, Republic of	447
12	Russian Federation	526	31	Turkey	429
13	Australia	525	32	Jordan	428
14	Czech Republic	520	33	Iran, Islamic Republic of	422
14	Finland	520	34	Indonesia	403
16	Malaysia	519	35	Chile	392
17	Bulgaria	511	36	Philippines	345
18	Latvia-LSS	505	37	Morocco	337
19	United States	502	38	South Africa	275

Source: NCES, 1999 TIMSS Results



four or five hours a night, you'll be a failure in school and in life."

That evoked laughter and nodding of heads from the other two panelists who proceeded to talk about the amount of time they had attended after-school and weekend tutoring programs and late night rides home on subways or buses. Another panelist commented on the cost families incur for extra-night or weekend tutoring or classes for their youngsters. One reporter on the panel said "nearly one-fourth of my take-home pay went for night school costs for my children." That also evoked nodding of heads from the other two panelists.

Suffice it to say that the North Carolina delegation was speechless at the thought of young people going to their normal school early in the morning, arriving home mid-afternoon and then leaving to attend night school until 8:30 or 9:30 PM and returning to homework after that. To American ears that describes something akin to child abuse; in Korea it is an example of a student putting forth effort.

The panel discussion didn't prepare the delegation for the degree to which the South Korean culture takes for granted the amount of effort parents and students devote to schooling. The expression "if you are sleeping

more than four or five hours a night, you'll be a failure in school and life" was echoed repeatedly in different settings, by different people. Stories of the percentage of parents' salary devoted to after school and weekend schooling were also echoed repeatedly in different settings, by different people. And it was apparent that this is not the first generation of Korean students that were expected to excel as much as possible in school. They were only following in the footsteps their parents had made growing up. Adults the delegation met would laughingly tell stories about how much time they invested in after school and weekend programs when they were youngsters in much the same way fraternity brothers in North Carolina would joke about surviving hazing in college.

While "parental involvement," or the lack of it, is one of the first barriers cited to high student performance by educators in North Carolina, the reverse is true in South Korea. How much it is the reverse was underscored when the delegation posed this question to the principal of an elementary school: "What are the primary challenges you face as a principal?" The response: "My parents are too motivated." To fully understand these phenomena it is necessary to return to Korea's

Confucian roots. How well, or poorly, a Korean student does is a reflection first on his/her parents. Did they not care enough to focus their child on learning? Were they not willing to make the economic sacrifice necessary to have their child attend the best night schools? Student performance is also perceived as a reflection on a student's school, on the quality of his/her night school and on the community.

Subsequently the pressure on young people is extreme and laws and practices compound it. South Korean youngsters can not get a driver's license until they are in their twenties. School-aged children cannot hold after-school jobs unless given permission by their principal – and then only after demonstrating that a dire family economic need exists. High school sports are de-emphasized and student athletes are largely drawn from the ranks of those not aspiring to go on to college.

Schooling is viewed as the "job" of school-aged children. Sports, cars, jobs – these are viewed as distractions that take young people away from their primary responsibility – excelling at school.

Beyond the culture of responsibility that drives South Korean families' attitudes toward schooling, there is an economic reality that provides an equal, and quite possibly, stronger motivation for parents to



push young people to excel. Admission into Korea's colleges and universities is decided by merit. Only the top students, for instance, will be accepted at Seoul National University and college ties run deep. Major corporations tend to hire only graduates of a handful of prestigious universities. Being a graduate of one of the top schools in South Korea is practically a guarantee of success as an adult. In a nation where 64% of the high school students go on to college, that means that a graduate with a degree from a lesser-regarded college in rural Korea may very well end up with what would be considered a blue-collar job.

Beyond the pressure to bring pride to one's family, Koreans know that admission to the right college coupled with a degree from the right college mean success and economic status as an adult. Conversely, in one of the world's most educated countries, a degree from the "wrong" college more and more means little.

To underscore the pressure on high school students seeking admission to one of the nation's top colleges and universities, 679,000 students will take the admission examination similar to our SAT – only 22,000 of them will be accepted to one of the top five schools. The security surrounding the national examination underscores the gravity of the test.

Each year, a committee of highly respected educators is assembled to determine the questions on the test. They are sequestered in a hotel not only during the creation of the examination but remain there until the test is given.

Not surprisingly, at least two Korean presenters described the pressure on young people like this: "from the time you're born you are in a fierce competition."

### The Tail Wagging the Dog

Even in the context of an education meritocracy it is important to note that there are many thoughtful Koreans that deplore the educational pressure put on young people. College officials, educators in traditional schools and even policymakers who met with the North Carolina delegation bemoaned the pressure on young people, the economic sacrifice of families and the growing importance of night schools in the culture.

Pressure to change the nation's educational system led South Korea's Parliament, a one-body House made up of 273 elected members, to enact a law that would have banned night schools from operating across the nation. However, the law, enacted in the eighties, proved to be unenforceable. Parents hired private tutors who would come to

their homes and the law evoked a public outcry that led to its repeal. The night and weekend for-profit schools are now a major growth industry as the North Carolina delegation saw first hand when they visited Jong Ro M School at 8 PM one evening. The school enrolls 3,200 students and is one of 200 schools operated by a for-profit firm that is creating a nationwide chain of night schools. Housed in a six-story building, the night school was full of junior and high school aged students, many of whom would be taking courses until 9:30 PM. The average cost of night school is \$300 per month per student.

Instruction was fast-paced and students appeared attentive, even though they had attended their regular schools during the day and the time of the delegation's visit extended until 9 PM. Later in the week, the delegation would learn that it is not uncommon for night school teachers to earn considerably more than teachers in regular government-run schools – in some cases twice as much. The delegation also learned that, predictably, the best night schools and, subsequently, the best teachers were located in affluent neighborhoods and charged the highest tuition. The focus of the night schools is singular – to have its students qualify for Korea's top universities. Student success in college admission is the primary



marketing tool of the night schools.

While this finding is not the result of a scientific study, members of the delegation, in conversations with presenters and translators and in dinner discussions with college students and faculty, found that Koreans regard the night schools highly. Some contended that the teaching was superior to that during the day, and when asked if they would or did send their children to night schools, even critics of the cram schools would quickly admit that they did or would.

One Korean official said, "Class size is so high parents don't believe their children will learn without tutoring." It should be noted that, by North Carolina standards, class sizes are very high. The government's goal is to reduce class size to 35 by 2005.

Do regular day schools drive the educational process; or, do the for-profit night schools drive the regular schools? It is a difficult question to answer, but the combination of the two touches the overwhelming majority of South Korea's young people. The government estimates that over 60% of middle-schoolers attend night classes and, by the time students enroll in high school, the number swells to over 80% of South Korea's students enrolled in night classes. Government

economists estimate that the tuition South Korean parents spend on these schools equals the national government's total investment in education – bringing the nation's educational spending to a level equal to 8% of the gross national product (GNP).

Throughout the week the delegation spent examining schools, no topic was more hotly debated than the value of night and weekend classes. Some in the delegation argued that in the United States large numbers of students are engaged until late in the evening; however, they typically would be engaged with a part time job, instead of with learning. Others felt that the national obsession with education and college admission bordered on being unhealthy and that young people were being denied a well-rounded childhood. The delegation also questioned the age and grade appropriateness of the new cram schools for kindergarten and preschoolers that are scheduled to open next fall.

### Time Spent Learning

Regardless of whichever side of the night school debate one took, the delegation concluded that a key to understanding South Korea's performance on international tests was the amount of time students spend learning. For the majority of students who are enrolled in night

schools, they in essence are receiving nearly double the educational time that a student in North Carolina receives. Consider the following:

- South Korea's regular school year is longer than North Carolina's – 220 days versus 180 days of instruction. Presuming a 6 1/2 hour school day, Korean students only attending regular schools during the day receive 260 hours or 40 days more instruction than do students in North Carolina.
- For the majority of students enrolled in night courses, they would typically receive an additional 2-3 hours of instruction at night. Using a conservative example of 2 hours of instruction at night for 200 days during the year, Korean young people are receiving additional instruction equal to 400 hours per year. 400 hours per year is 40% of the 1,000 hours of instruction required per year by North Carolina law.
- The combination of the two time factors (i.e., longer school year and the majority of students attending night classes) adds the hourly equivalent of over 100 additional days of school to the educational year of a South Korean student. In four years of high school, that is the equivalent of two additional years plus of schooling for a North Carolina student.



Most students attending night classes are taking coursework in mathematics, reading or foreign languages, usually English. Given the additional time spent in formal learning, the performance gap between South Korea's students and those in other countries, especially those in the United States, becomes readily understandable. In research terms, there is general agreement that the more time a student spends learning, the more they will learn.

Additionally, South Koreans and Americans have a vastly different view of extended school day programs. In the United States, after school programs, especially private tutoring programs like Sylvan Learning are typically used for remedial education. In South Korea, extended day programs are employed to push children ahead, to take them as far as they can go. As will be seen later, time is not the only factor contributing to the success of South Korea's students, but it is a factor that cannot be ignored.

## Science & Mathematics in South Korea Schools

Just as the delegation was given a prelude to what they would discover about parental involvement in the schooling of Korean young people, so did it get

a preview of what they would find out about math instruction in Korea.

### **Instruction**

The panelists of Korean-educated parents with children enrolled in North Carolina schools were asked what changes they would make in America's schools if given the opportunity. One panelist, a faculty member at North Carolina State University, seized on the question and quickly replied, "Number one, I would forbid students to use calculators until high school. Number two, I would end the use of work sheets." He went on to state, very assertively, that it quickly struck both him and his daughter that once a student in North Carolina can complete a work sheet they are ready for the test because the work sheet and the test tend to be mirror images of one another. "There's no incentive to keep on studying," he said.

Additionally, he decried the lack of basic math skills that many of his United States-educated students possess – even those majoring in engineering – and attributed it to the use of calculators that performed basic functions for students who had not been sufficiently grounded in math basics. His view was restated by a professor in a School of Education in South Korea who said, "the basic difference I've observed

between our students and yours is that Korean students could make change if they worked in a MacDonald's; your children use computerized cash registers with pictures on the keyboard to do the math for them."

Those comments were a good introduction to what was observed about the teaching of math in Korea. Students do not use calculators; instead they are drilled through repetition in the basics – multiplication tables and the like – until they are well grounded in the basics. Instruction is fast-paced and very teacher driven. The focus of instruction, however, is much narrower than that in the United States. The object of instruction is not to "cover" large amounts of material or theory. Instead it is aimed at understanding concepts. Studies comparing the curriculum typically used in American classrooms find that our nation tends to attempt to cover large quantities of material, and because any of the material in a course could end up on standardized tests, of necessity, concepts are covered quickly and little time is focused on applying what has been learned. Researchers contend that the typical American curriculum is "an inch deep and a mile wide," a criticism that has forced North Carolina to re-examine its math curriculum. In contrast, South Korean, and for



that matter Japanese and Dutch, schools attempt to cover far less material but do it in depth – not in breadth. That means much more time grounding students through repetition, memorization and problem exercises. And, it is important to remember, South Korean schools have far more days in which to cover in depth far fewer concepts and what is learned during the day is reinforced in for-profit schools at night.

#### **Science Instruction**

As for science, the classrooms the delegation observed were well equipped – not lavishly, but adequately. In most of the classrooms observed, teachers relied heavily on projection screens that enabled them to make use good use of AV material and graphic depictions of experiments. Students, working in teams, did experiments during class, again reinforcing through hands-on work, concepts being taught in the classroom.

Science teachers who were part of the delegation generally agreed that because of the breadth of North Carolina’s curriculum and the time limitation of the school day/year too little time is spent on experimentation in most science classes.

Those same observations were made when North Carolina teachers visited classrooms in the Netherlands. There, science

teachers have full-time teacher assistants who are responsible for setting up experiments and for cleaning up after classes end, thus making it possible for teachers to use experimentation and hands-on work on a routine basis. And, at the risk of belaboring the point, one must again remember that science teachers in South Korea or the Netherlands have far more days in which to cover far less material in depth.

An interesting feature of South Korean education is its 16 science high schools, residential institutions much like the School of Science & Mathematics in North Carolina, designed to help gifted students in science realize their full potential. The delegation visited one such school and was surprised to learn that its teachers receive only slightly more compensation than their counterparts in regular high schools. Teachers there stressed the importance of science Olympiads and other international competitions.

And the students in Korea’s special Science and Mathematics High Schools, like their counterparts in North Carolina’s School of Science & Mathematics are achieving at high levels. The Seoul Science High School, which opened in 1989, has seen its graduates advance rapidly. Eighteen have already earned doctorate degrees; 30 are currently studying at Harvard.

## **A Focus on Teaching**

As noted earlier, the delegation’s visits to schools, government agencies and colleges were arranged by the faculty of Ewha’s International Education Institute. Through them, the delegation was also able to get insights into the preparation of teachers in South Korea.

It should be noted that Ewha Women’s University is a rather remarkable institution. It is the largest all-woman’s college in the world. It was the first exclusively woman’s college to create a School of Engineering. And, as the delegation would hear from others not affiliated with the university, its graduates are highly regarded. The university was vibrant. Its campus would remind one of New England, attractive buildings set in a hilly, wooded area, yet located close to a bustling commercial area within Seoul.

Arranging international visitations is only a small part of Ewha’s International Education Institute. The university prides itself on attracting students from a growing number of countries across the world and has a very international focus.

Although not highly profitable in Korean terms, teaching is an attractive and honored profession. Beginning teachers earn salaries roughly comparable to those in



the United States, and experienced teachers are paid at a relatively higher rate than in the United States. However, it is apparently the stability of the profession and less stress than one might experience in business that attract students to teacher training. According to Professor Oh Nam Kwon, Professor, Math Education, Ewha Women's University, approximately one-fifth of the 25,000 teachers trained every year actually get jobs. Entry into the profession is highly competitive and, as in college entrance, results on examinations weigh heavily. Teacher training institutes place priority on preparation in the subject matter. According to Professor Huh, a member of the teacher training faculty at Ewha Women's University, approximately 60% of teacher training deals with the subject matter and 20% each to liberal arts and pedagogy although the ratio varies by institution.

Beginning Korean teachers have time for planning during their workday. According to Professor Kwon, elementary teachers prepare 20 minutes for each class unit, and middle and high school teachers spend one hour per day for each class unit on preparation. High school teachers teach three or four hours a day and spend most of the rest of their time in teacher work rooms where they can and do plan

and consult with colleagues on educational issues.

Principals and vice principals are drawn from teacher ranks through a well-defined system of advancement based on additional credits. One must have worked three years as a teacher to be considered for vice principal. Periodic rotation of teachers and principals among schools invigorates the educators. Koreans believe that not only do teachers and principals experience professional growth as a result of working in different environments, but that schools that otherwise would be difficult to staff have a guaranteed influx of highly qualified teachers and administrators. It is worth noting that both teacher and administrator assignments are made by the Ministry of Education, not through a local selection process. On average teachers are reassigned every five years and principals every three or four.

The focus on classroom practice does not end when one completes college training to become a teacher. Once on the job, teachers are expected to continuously refine their classroom practice. Teachers and administrators earn points through taking additional college course work, attending conferences and doing educational research or innovative projects.

The point system not only guarantees that educators continue polishing their skills, but it is the basis upon which one can move from teaching to administration.

## A Comment on Building Facilities & Supplies

As previous International Studies delegations observed in Japan, England and The Netherlands, the United States has a different concept toward facilities and supplies than do other nations in which students are high performing. As in the other countries, school facilities in South Korea are, for the most part, very unimpressive. They do not have large open areas; the architecture is uninspiring. They are, however, well maintained and clean.

Media centers, compared to those in the United States are small and the scope of books and materials available is far narrower than that in most schools in North Carolina.

One of the starkest contrasts is in the limited amount of technology in elementary and middle schools. While teachers are well equipped – almost all with a computer and large-screen projection devices – there are relatively few computers available for student use in the lower grades. One thing that is quite different is the degree to



which schools evidence a tradition. Pictures of former principals line the hallway walls. Schools convey a sense of tradition and history.

Another stark difference is that schools in Korea are not surrounded by acres of parking lots – as noted earlier, young people in South Korea can not be licensed to drive until they are in their twenties. Instead of cars surrounding schools in Korea, bike racks are in abundance. Nor do schools have large amounts of land dedicated to athletic fields. There will be an area for outdoor physical activities, but nothing that would compare to a North Carolina school complete with football and baseball fields and bleachers, tennis courts and oval tracks for organized competition. In no small part the absence of athletic facilities is due to the fact that the Ministry of Education only provides funding for one sport per school!

A quick glance at a South Korean high school underscores different philosophies toward education and toward youth in the United States and South Korea. In one country, athletics and automobiles are viewed as distractions from the primary job of a student – learning. In the other, sports and cars are seen as an entitlement – part of what it means to “be a kid” growing up in America.

## The National Government’s Role in Schooling

Like most developed countries, South Korea has a national curriculum and national tests. Korean teachers across the country also use essentially the same textbooks and have access to the same high quality teaching resource material. As one member of the North Carolina delegation observed, “the national curriculum provides Korea with an organizing structure out of which comes lesson plans, textbooks, videos, challenging problems and teaching aides that are used across the nation.”

South Korea’s heavily centralized educational system is reflected not just in uniform policies, but also in funding practices. The national government funds 90% of school costs, leaving Provinces to shoulder only 10% of the cost of public education. The National Minister of Education is an elected official as are the 16 Province Ministers of Education. The nation’s 180 school superintendents are appointed by the Province Ministers of Education.

The uniformity in the schools in Korea goes far beyond that which exists within North Carolina, much less within the United States. In contrast to Korea, curriculum standards and testing are different

in each of the 50 states and the District of Columbia. While some states have statewide curriculum standards and tests, others do not. Even within states like North Carolina that have statewide standards and tests, there are very dramatic differences in textbooks and teaching resource material used in classrooms – even within school systems. That is not the case in Korea and the delegation found pluses and minuses to the system. On the plus side of the ledger, beginning teachers have access to a wide range of teaching resource materials that have been successfully used elsewhere. They do not, unlike a new teacher in North Carolina, have to develop lesson plans, material, AV supports and the like.

Also on the plus side of the ledger, the uniformity insures that all students will be exposed to the same foundation blocks and that they, at least in theory, will all have a grounding that will prepare them for the all-important tests in their high school years.

On the negative side of the ledger, teachers in the delegation felt that South Korea’s uniformity would stifle creativity – especially for seasoned teachers who, unlike beginning teachers, have grown beyond “the basics” and want to take their students farther, faster.



## THE NEVER-ENDING SEARCH FOR BALANCE

The plusses and minuses of South Korea's highly uniform system versus the diversity of American schooling takes one to a much larger issue – one which virtually all countries confront. Many of the things that appear to be keys to the success of South Korea's students on international comparisons of student performance – the time spent on education in and out of the regular school day, uniformity, drilling on basics, memorization, teacher driven instruction – are under question in Korea. Many feel the country's approach stifles student creativity and look at schools elsewhere, including the United States, and ask if they shouldn't make major changes in their approach to schooling.

The Japanese have undergone similar debates in recent years and are in the process of lessening the amount of time young people spend in schools by dropping instruction on Saturdays and making other changes aimed at fostering creativity. Ironically, while that debate is underway in Pacific Rim countries, in the United States, the recently enacted No Child Left Behind legislation is taking the country closer to nationwide standards and testing programs at the same time that federally funded after-school programs like the 21st Century initiative are adding significant amounts of after-school time for at-risk youth. Another point much discussed in South Korea is the broad-based perception that when it comes to

graduate schools, those in the United States are much better than those in Korea. Especially in areas like engineering and medicine, it is common for students who attend Korea's top colleges to come here for their graduate work.

In short, the search for paths to excellent schools remains elusive, even in a country like South Korea that out-performs schools in the developed world when it comes to K-12 education.

Equally elusive is the search for balance – finding the right combination of academics and socialization, of pressure to excel and time to discover. These are challenges of educators and policymakers worldwide.



## LESSONS LEARNED...

Following are the delegation's major conclusions:

1. North Carolina is not Korea. It cannot draw on a Confucian tradition in which education is central to culture and family.
2. The role of parents in South Korea and their willingness to sacrifice for their children's education is testimony to the impact parents can make. The search for strategies to draw parents into the process must intensify.
3. It is unlikely that North Carolinians would want the majority of their children's waking hours to be devoted to learning; however time is clearly an ally of Korean educators.

Initiatives like More at Four, Smart Start, and after-school programs could make the difference between failure and success for thousands of North Carolina's students and must be continued.

4. In three of the highest performing nations in the world North Carolinians have learned the same lesson – a narrower curriculum with a focus on learning concepts will develop students better grounded in foundation learning blocks than a curriculum that is “an inch deep and a mile wide.”
5. Significant improvement in educational performance will only occur as teaching improves.

A focus on developing high-quality teacher resource material and teaching strategies that successfully convey new concepts to children cries out for more attention in North Carolina.

6. Frequent breaks for children during the day facilitate learning. This was noted especially in the elementary schools where students have several short breaks during the day.
7. The South Korean education system affirms North Carolina's growing stress on the quality of teaching. It grounds teachers in their subject matter and then provides them with time for planning.

## A POSTSCRIPT

As this report is being written the increasingly strained relations between North Korea and the United States are front page news. During this first week of March, North Korean jets intercepted a United States spy plane and alleged it had strayed into North Korean territory. Also this week the United States announced that it is deploying additional troops to South Korea.

On the last day the delegation was in South Korea, it traveled to see first-hand the DMZ and it was a sobering experience. The 45-minute ride from downtown Seoul

to the DMZ underscored the fragility of the city if war were to break out. The four-mile wide DMZ is all that buffers either country from the other and with armed forces massed on both sides of the border, an outbreak of hostility would threaten Seoul and its 20 million inhabitants.

On the South Korean side of the DMZ stands a new, empty train station that will serve the railroad planned to open up travel to and from the two Koreas. It is a monument of hope to a country that for much of the early part of the twentieth century was

occupied by Japan and, since 1953, has been divided by a line that has split families and a nation. Prior to the trip, news about Korea meant little to most of the delegates. Since getting to know the people of South Korea, hearing their hopes and dreams for a reunified Korea and standing in the DMZ, the news now evokes names, faces, the sound of children, images of a bustling, hopeful city. And so a profoundly meaningful visit came to an end with new lessons learned and ideas that could strengthen the schools of North Carolina.



## SPECIAL THANKS TO OUR KOREAN HOSTS

As noted earlier, whether in schools, in meetings with government officials, on the campus of Ewha Women's University, or walking the streets of Seoul, the North Carolina delegation was warmly and graciously welcomed. Those the delegation had an opportunity to interact with were candid and forthright in their observations about schools in Korea.

Two evenings best exemplified the reception the delegation had in South Korea. The first was being invited to take part in the Annual Thanksgiving dinner of Ewha's International Education Institute. All of the students enrolled in the program and their faculty members were there for a very traditional turkey dinner complete with stuffing and mashed potatoes. Little did the North

Carolina delegation suspect that it would be feted to Thanksgiving fare while in Seoul, Korea.

The evening included entertainment from students from different countries and, for the delegation, offered a wonderful opportunity to have long conversations with students and faculty about education and life in Korea.

The last evening the delegation spent in South Korea they were invited to attend a banquet sponsored by the Korea-United States Exchange Council, an organization that has worked to foster closer ties between the two countries for over a decade. One of the founding members was former Ambassador Richard Walker, who briefed the delegation in advance of the trip to Korea.

The evening, by any standards, was unique. Some of the country's top business and political leaders attended the event and delegates had a rare opportunity to meet and talk with some of the more influential leaders in South Korea.

While those two events were special, the opportunity to talk with educators, visit schools and watch Japanese young people in school settings was of most value.

The delegation owes a debt of gratitude to the faculty of Ewha Women's University who arranged the itinerary, to school officials, teachers, governmental officials and elected leaders who opened their doors to the delegation. Hopefully, bridges between North Carolina and Korea have been built that will open up the potential of continued dialogue and learning from one another.



Members of the North Carolina Delegation and professors from Ewha Women's University.

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