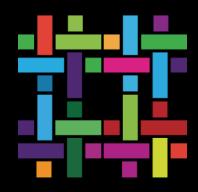
CITYNET Y O U N G PROFESSIONALS

2013 Annual Report





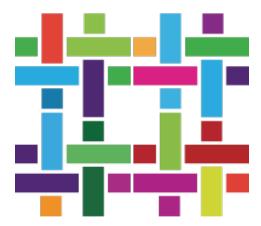
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Welcome Message



As cities in the Asia-Pacific region continue to grow and face challenges such as ecological degradation, traffic congestion and social displacement, it is essential that today's youth and tomorrow's city leaders are aware, informed and motivated to address these demands.

Recognizing this, the CITYNET Secretariat established a voluntary student-led organization as a vehicle to engage youth in pressing urban development issues and increase awareness of the big challenges affecting young urban citizens. Based on the success of the CITYNET Youth Japan program in Yokohama, it was an obvious decision to replicate the ideology in Seoul.

Introduced in July 2013 and officially launched at the CITYNET Congress in November 2013, the inaugural CYP



The CITYNET Secretariat, Seoul Global Center.

membership consists of a small group of dynamic students and junior professionals from backgrounds as eclectic as literature, geography, economics, public policy and business. As the primary movers of this initiative, they have demonstrated a truly remarkable degree of commitment, determination and spirit. They can all be very proud of establishing something which will be an international vehicle for youth participation, issue-orientated activism and social change for years to come.

I would like to express my sincerest thanks to the 2013 CITYNET Young Professionals for their hard work and enthusiasm and I greatly look forward to working together on more exciting projects, events and campaigns in 2014.

Ms. Suzin Ahn
Director of Programs, CITYNET



Introduction



Young people are an integral part of our urban communities and it is critical that they develop a practical understanding of the complex problems they will inevitably inherit. Based on this belief, the CITYNET Young Professionals (CYP) was established by the Secretariat in July 2013 as a means of engaging youth in pressing urban development issues, producing unique pieces of research and raising awareness of themes often left off mainstream political agendas.

Based in Seoul but with ambitions to expand overseas, this voluntary and youth-led association of future city leaders has already garnered traction as an emerging voice on contemporary urban issues. Decidedly international, the inaugural CITYNET Young Professionals included 25 students and recent graduates from 14 different countries united by a shared passion to create livable, sustainable and youth-friendly cities.

This publication showcases a selection of the notable activities and achievements of the foundational CITYNET Young Professionals and presents the innovative pieces of group research the young professionals spent three months harnessing the CITYNET network to compile. Organizing themselves into research teams focused on Green Growth or Multiculturalism, the young professionals used the contacts and resources of CITYNET to conduct field work, interviews and capture



The Young Professionals attending a General Meeting.

empirical information on their chosen research topic. Their final research papers are titled as follows:

'Green' Solid Waste Management in Seoul: An Analysis of the Shift from Historical Fast Disposability to Development and Sustainability.

Transport Oriented Development as an Urban Green Growth Strategy: The Human Perspective.

Multicultural Education in Seoul, South Korea: A Critical Review.

Young North Korean Defectors and their Adaptation Challenges in South Korea.

The Members





From left to right: Jeongyoon Hur (Treasurer), Alicia Jang, Kyungjin Jung, Katerine Figueroa and Cho Young Mook.



Daniel Delacy and Tang Xiangning (with Mary Jane Kunchol Kim (CYP President) and Kychele Ortega, CITYNET Secretary General).



Boone.



From left to right: Seongha Cho, Wonseok Chang and Kychele Boone.



Sunyoung Park and Sayel Cortes.



Kyeihong Kim, Oum Vantharith and Kunchol Kim.



Member Spotlight



Daniel Delacy

My interest in urbanization began while I was still in high school. The school had been built years ago along a highway where planners hadn't thought to install any pedestrian facilities. One evening, after a parent-teacher conference, one family walking along the hard shoulder was hit by a car. Very sadly, most people involved in the accident were killed. For the next several months, I acted for change by standing on an overpass counting the hundreds of students who every night, rather than walking for over a mile to the next crosswalk, decided to illegally cross the road in front of the school. I later submitted this information to my state's Department of Transportation with the request that they put in a light and crosswalk. They followed through a few months later with the installation of a sidewalk, street lights, a traffic light, crosswalk, and traffic island.

This experience proved seminal and inspired me to gain a deeper appreciation of how city infrastructure should safely and conveniently serve its users. CYP has given me the opportunity to learn more about Seoul's development history, the challenges it will face in the future and the responses the city is employing.



Daniel and research partner Tang Xiangning.

I am convinced that in a dynamic city such as Seoul, with its stabilizing population but growing wealth, there are a great number of areas where the unique insights and fresh ideas of an international group of young professionals would be very welcome. While it may not lack technological innovation, Seoul needs the creativity, dynamism and entrepreneurship of its young people to become a truly world-class city.

The research opportunities one gets while at CYP are exceptional and the access feels limitless. I really enjoyed meeting with city employees who provided invaluable information for my research.

Member Spotlight

排排

Sayel Cortes

CYP put me in touch with urban development issues in Korea. As a foreigner in Seoul, I was looking for opportunities to network with people who share similar interests in transport, urban planning and urban design. The CYP program, its invitations to conferences and contacts with industry insiders really allowed me to get to grips with these topics. I also built many new friendships, particularly through the Green Dreams Conference for Youth in Jeju and the group research task.

I believe this year's Young Professionals have produced unique, interesting and quality pieces of research in a very short space of time. This proves the interest, commitment and determination of young people to address our current urban development challenges. With the right opportunities and support, I believe the Young Professionals have the drive and ideas to make a real difference - even if we lack the formal experience.

I really hope there are more CITYNET Young Professionals activities that I can be a part of. I think the initiative can provide a vital link between developing cities and their youthful populations.



Sayel and research partner Sunyoung Park.





Member Spotlight

排排

Sunyong Park

Before joining the CYP program, I did not fully realize the huge role transportation plays in so-

ciety. Through conducting my research paper however, I gradually came to realize how each small element of the urban environment can come together to make moving around a city easier and ultimately improve people's quality of life. I now look at Seoul completely differently.

In addition to transport, this program has introduced me to many different areas of urban and international development and triggered a real personal interest in the functioning of cities. I did not have much professional experience or deep knowledge of this area before, but this program has really helped me understand the field and recognize what I need to do to pursue a career in this line of work.

There are many movies which cast doubt on our future and depict dysptoic scenarios where we live with severe pollution and minimal resources. If these scenes are to remain fictional, it vital that my generation understands how to harness the world's resources without negatively impacting the environ-



Sunyoung Park with the Green Gowth Cluster.

ment. I think the CITYNET Young Professionals program is a great way to make young people aware of the challenges we will eventually face.

Activities:

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Green Dreams Conference for Youth

The CITYNET Young Professionals attend their first international workshop.

Nikola Medimorec talks us through his experiences of the Green Dreams Conference for Youth.

"This 3-day workshop on environment-friendly development was organized by CIFAL Jeju and UNITAR. The location was the beautiful Korean island Jeju and around 70 university students participated.

The first day included lectures about climate change, green industry and Jeju's unique species. On the second day the participants chose either to go hiking or swimming. That perfectly covered both main characteristics of Korea's largest island. Even though there were a lot of activities during the day, each evening we had to prepare a presentation about an environment-related topic.

We met a lot of new people and visited places on Jeju which tourists only seldom see. "Nature, Future and Youth" was the slogan of the event and the participants were obviously very ambitious and concerned about the earth's future. For the final activity, we each had to introduce our own personal "green



From left to right: Nikola Medimorec, Jeongyoon Hur, Amb. Dal-ho Chung (CIFAL Jeju Director), Marina Brenden, Sayel Cortes and Wonseok Chang.

dream" in a 30-60 sec video clip.

Thanks to the CITYNET Young Proffesionals program I was able to enjoy new experiences and see Jeju's beautiful mountains and beaches. I hope that the spirit of our group will spread the idea of green development and that many people will pursue their green dream."





Activities: The CYP Congress

##

CITYNET proudly staged the Young Professionals Congress on Saturday October 12th 2013 at the Seoul Global Center.

The CYP Congress gave members an opportunity to publicly present their unique research papers (displayed at the end of this document), receive constructive feedback from an expert panel of industry leaders and engage in lively discussion. The panel of experts included:

- Mr. Peter Beck, Country Representative (Korea) of The Asia Foundation.
- Mr. Mun Kyung Yun, Deputy Director of Seoul Metropolitan Government's Resource Recycling Planning Division.
- Dr. Shisir Prasad Manandhar, Researcher at Seoul National University's Technology Management, Economics and Policy Program.
- Mr. Young-Jong Kwon, Research Fellow at The Korea Transport Institute's Division for KTX Economic Development & TOD Research.
- Mr. Casey Lartigue, Jr., International Adviser at Mulmangcho School.

The Expert Panel cast their votes to determine which research team had produced the most robust, original and relevant paper and presentation. The winner was announced and presented with the CYP award at the CYP official launch (see page 15).



Members of the expert panel. From left to right: Mr. Mun Kyung Yun, Mr. Young-Jong Kwon and Mr. Peter Beck.



Cho Young Mook, Alicia Jang and Katerine Figueroa with Mr. Casey Lartigue, International Adviser for Mulmangcho School.

Activities: The Official Launch at the 2013 CITYNET Seoul Congress



The welcome reception of the 2013 CITYNET Seoul Congress provided the perfect opportunity to officially launch the Young Professionals program on the world stage.

In front of an esteemed audience of city mayors and world leading figures in international development, Mary Jane Ortega, the CITYNET Secretary General, expressed her admiration for the Young Professionals' passion and gusto and announced Mr. Daniel DeLacy, Ms. Xiangning Tang and Mr. Kyeihong Kim (in absentia) as the deserved winners of the 2013 CYP award for their meticulous research paper and presentation on 'Green' Solid Waste Management in Seoul. The winning team was determined by the expert panel at the CYP Congress according to the accuracy, originality and relevance of their research efforts and the strength of their accompanying presentation.

CYP President Kunchol Kim delivered a testimonial speech celebrating the members' achievements and explained how chairing the program had positively impacted his life. Via video message, members of CITYNET Youth Japan bestowed



The CITYNET Young Professionals at the program's official launch.

their congratulations and spoke of their ambitions to embark on joint projects in the near future. Wrapping up proceedings, the CYPs were fortunate enough to have a group photo with the Mayor of Seoul and the CITYNET Secretary General (see overleaf).





Research Papers

'Green' Solid Waste Management in Seoul: An Analysis of the Shift from Historical Fast Disposability to Development and Sustainability.

Authors: Daniel Delacy, Tang Xiangning, Kyeihong Kim and Oum Vantharith.

Abstract

An analysis of the environmental and economic cost of Solid Waste Management (SWM) programs in the Seoul Metropolitan Area.

Specific attention is given to recycling, waste-to-energy, and landfilling at Nanjido and Sudokwon landfill sites.

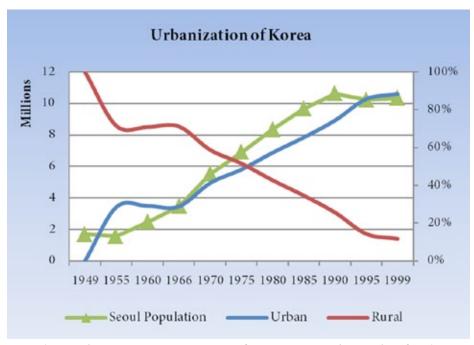
Recommendations are made of a pragmatic and exportable 'Green Growth' model of South Korean SWM practices to other developed and developing countries.

Through research, our team hopes to raise awareness of incineration issues and propose effective solutions that can be introduced in the near future.

Introduction

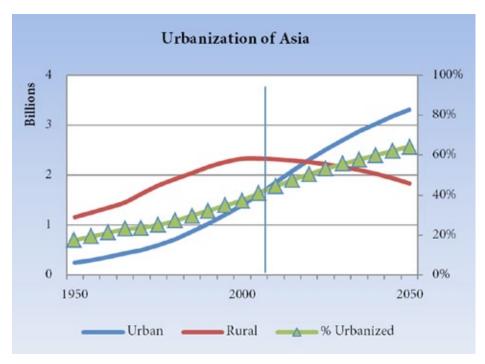
Seoul Special City and its citizens is the subject of, 'The Miracle on the Han River'. A poor and war ravaged city coming out the Korean War, Seoul was the capital of the poorest nation in the world in 1960. This nation however, was transformed from one of poverty to one of the privileged free and developed Four Asian Tiger economies. A nearly four decade long era of rapid industrialization, urbanization, and consumerism changed the dynamics of this nation in ways that other Asian developing nations are currently experiencing. Among these is the question of sustainable solid waste management.

Socio-economic development affects the types and quantities of waste generated by a given population. Disposable income, living standards, and imports into a more globalized and connected domestic market all change what people consume and dispose. This phenomenon is all the more magnified in a quickly growing economy as fast growth leads to fast consumerism. Fast fashion and fads in a rapidly changing landscape feed on economic growth and leave amazing quantities of consumer, construction, and industrial waste behind. Like other nations putting economic growth before sustainability, South Korea had suffered from such unchecked waste.



(United Nations, Department of Economic and Social Affairs)

The development and subsequent urbanization of Korea is an occurrence not unique to this nation. As Eastern countries become more free, open, developed, and capitalist in nature, their populations in seeking greater opportunities coalesce into great urban centers. The challenges for these Asian countries are profound. By 2050, the population of Asians living in urban cities is expected to double. At the same time, a growing middle class will come to expect a greater degree of basic services including sustainable management of solid waste. Ideally, such services would at some point include the building of long-term infrastructure with consideration given to fiscal health, enhancement of resource efficiencies to improve the life of its citizens and the poor, and promotion of the city's competitiveness.



(United Nations, Department of Economic and Social Affairs)

Obvious and usually most unpopular among solid waste management systems is landfilling. In 2003, there were 352 landfills in operation in Korea. Of these, 269 were for solid municipal waste while 83 were for re-

ceived hazardous waste. (OECD 83) These numbers conceal the fact that as of 2002, the cost of economic growth created a nationwide register of 1,170 modern era landfills (Ministry of Environment, 2003). The fact is, citizens of developing countries have many reasons to avoid discussing what to do with the waste their society generates. While modern landfills are designed to control the release of ground and air pollution in the form of leachates and gases, a clear majority of landfills around the world were not engineered with environmental considerations in mind. Korea, until recently among the least developed of nations, was forced to address the subject of solid waste management and through the Green Vision 21 plan, has spent a little over a decade moving to stabilize, rezone, and revive their closed landfill sites to mitigate any negative environmental, sociological, and economical factors. Nanji Landfill Site, a modern example of an uncontrolled landfill in Seoul, gives a clear example as to how the Seoul Metropolitan Government has worked to address the issues arising from uncontrolled dumping of waste. Solutions not only included stabilizing the landfill but also the creation of standards, regulations, education programs, and a new way of thinking about waste on a national scale.

Hypothesis

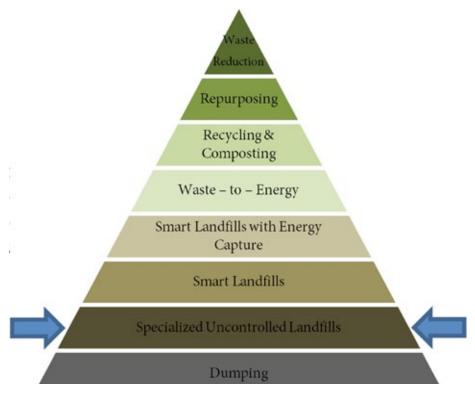
The Green Vision 21 plan, while addressing waste generation, primarily aimed to improve environmental quality in solid waste management by improving the level of technology performance in relation to integrated waste policy management. Areas targeted included: leachate treatment and gas recovery in landfills, the creation of efficient composting technologies, equipping waste to energy incinerators with advanced processes, and the development of recycling technologies. While successful in creating a more sustainable and green solid waste management practice, this paper recommends that a return to the more foundational 3R's (reduce-reuse-recycle) ought to be advanced for a more effective and complete transformation of waste management in Seoul. We believe that this applies for both Seoul (developed) and lesser developed cities and nations.

Korea Pre-OECD (1960-1995)

Old Landfilling- Korea (Nanji)

Introduction

Landfilling in Korea began in the same way landfilling has been done the world over. Until as recently as 1960, the citizens of Seoul made use of thousands of unmanaged landfills in swamps and other remote locations. Finally, in an effort to consolidate waste disposal, in 1964 the Seoul Metropolitan Government began to temporarily designate several small landfills within the city limits. Landfilling was further consolidated in 1978 with the creation of a singular landfill site situated on Nanji Island, an 898 acre (2,715,000 m²) island on the Han River. The site would reach capacity and close fifteen years later after being filled with 91,972,000 m³ of waste. (J. S. Lee 5) Today, the site is immediately adjacent to the Seongam World Cup Stadium and Park and has been converted into the Mapo Haneul (Sky) Park.



Nanji Island- Environmental Problems

Within fifteen years of its opening, the Nanji Landfill Site was filled beyond capacity. The city of Seoul's city limits had grown around and beyond the Nanji Landfill as the city had grown greatly in size from 5,525,262 to 10,612,577 souls. (Seoul Metropolitan Government) The Nanji Landfill was therefore closed in 1993. But closing of the landfill site led to a realization that the creation of such a large landfill now in the center of a major city, next to a major river, and directly across from the city's main water supplier, Arisu, meant that many challenges remained in maintaining sustainability of the local environment. The chief concerns were those relating to the leachate contributing to ground pollution and gas emission contributing to air pollution. Stimulus towards action was desperately needed for the wellbeing of Seoul.



1995 Joining the OECD and Subsequent Legislation

In the years leading up to South Korea joining the Organisation for Economic Co-operation and Development (OECD) in 1996, the nation entered into a preliminary environmental review period at which time experts from a number of other nations gave their recommendations for Korea's environmental development. South Korea then became a member of the OECD in 1996 and commenced a full environmental review period lasting from 1997-2005 during which time major progress was

made addressing air, water, and waste management. (OECD 15)

Not all environmental progress was made as a result of a shift towards

OECD standards and recommendations. As any nation reaches a level
of economic development, there is often a shift in societal perspectives
on environmentalism. Another characteristic of economic growth is that
affluence tends to push people into a mindset of 'Not in my backyard'.

Economically better off citizens become unwilling to be host to undesirable living conditions. A result of this was the creation of plans and
passing of laws further regulating solid waste management.

Green Vision 21 (1995)

Introduction

One of the first great and credible environmental quality plans of post-OECD Korea was the comprehensive Green Vision 21 plan which sought to improve national environmental quality by 2005. Unlike previous attempts by past administrations to improve nationwide environmental well-being, the results of the Green Vision 21 plan were far reaching and designed to be of lasting consequence. The Green Vision 21 plan was a particularly effective ten-year plan that greatly changed the way in which the Korean government managed waste and the way in which citizens and industry alike would treat their waste.

Waste Reduction was the first key to improved solid waste management at the national scale. In order to reduce waste, the national deposit-refund system rates on a greater variety of products were increased in 2000. This system was relatively unsuccessful as fee based revenue did not cover costs and a limited number of products reduced the scope of the program. On the other hand, in an ongoing effort to reduce food waste, the Food Waste Management Plan 1998-2002 mandated a decrease in the water content of food waste as well as its disposal in new composting facilities while landfilling would be prohibited. The effects were immediate and drastic. Within three years of the implementation of the volume based waste fee system in 1995, municipal waste generation fell by almost 18%. These gains stagnated however and have actually reversed as waste has increased as a percentage when measured as a unit

of GDP.

In addition to reducing waste generation, the second key to improving environmental quality in solid waste management relied on improving the level of technology performance in relation to integrated waste policy management. Areas targeted included: leachate treatment and gas recovery in landfills, the creation of efficient composting technologies, equipping waste to energy incinerators with advanced processes, and the development of recycling technologies. (OECD 43)

The third and final key in focusing national attention on sustainable 'green' solid waste management included the investment of an equivalent of EUR 209 million in 2005-2009 as well as the adoption and monitoring of stringent emission standards, creating economic incentives to recycling and shifting the recycling responsibility to producers. (OECD 44)

Old Landfill Recovery

Landfill Recovery Project

Over fifteen years, 1978-1993, the Nanjido Island Landfill site was inundated with nearly 92 million tons of Seoul's mixed household, construction, and industrial waste. Nanji Island, however, was not originally engineered as a smart or protected landfill. Not only was any and all waste accepted for burial, but no liners were installed to prevent the byproduct of decomposing waste, leachate, from leaking into the ground or into the nearby Han River. The result was a serious economic and environmental disaster. This became a chief concern and action became all the more urgent in 1995 after the discovery of contamination of both groundwater and the Han River.



<u>Master Plan of The Nanji Landfill Recovery Project</u> Leachate

The first and most pressing step of the Nanji Landfill Recovery Project was to prevent further leachate leakage into groundwater and the Han River. To this end, the site was first capped and topped with one meter of topsoil to limit smell and leachate production, engineered for leachate capture and treatment, equipped for landfill gas extraction and recycling, stabilized to maintain its slope, and in 2001 a 6,017 meter vertical cement bentonite slurry wall installed to the bedrock. Thirty one leachate collection wells at two hundred meter intervals were also installed for the treatment of the toxic decomposing waste. (LeeK., HanW.S., KwonB.D. 654)



(Seoul Metropolitan Government)

Landfill Gas Capture and Utilization

While perhaps not as visually concerting, also of concern at the Nanji Landfill site was the level of air pollution (the result oflandfill gas emissions being released into the atmosphere). In 2001 alone, the waste sector's 465 thousand tons of CH4 emissions accounted for 37.6% of the country's total methane emissions and were the largest source of these human-related emissions. (LarneyChristina, HeilMark, HaGyungae) The capturing and utilization of these gases for use as heat energy was a primary goal of the Green Vision 21 plan. As a result, 106 landfill gas extraction wells were installed at the Nanji Landfill site at intervals of 120 meters and routed to the Mapo Resource Recovery Center, a central facility run in partnership with the Korea District Heating Corporation which provides heating for local households and the Seoul World Cup Stadium. (Seoul Metropolitan Government)



Climate Technology Partnership (CTP)

One of the ways in which Korea entered into renewable energies from landfill gases was through a USAID-Korea partnership Technology Cooperation Agreement Pilot Project which provided funding and a forum with technological expertise in clean energy for developing countries. This provided funding and a forum with experts in clean energy technologies for developing countries. Following the project's conclusion, Korea once again entered into partnership with the United States of America in a Climate Technology Partnership. Here, members such as the U.S. Agency for International Development, the U.S. Environmental Protection Agency, the U.S. Department of Energy, and the National Renewable Energy Laboratory worked with Korean government entities to "create a self-sustaining market – whereby private developers seek opportuni-

ties to develop landfills, sell landfill gas as fuel, and realize profits – ... [in order to] foster economic growth, create energy security benefits, and reduce GHG emissions." (LarneyC., HeilM., HaG.-A. 4) This Climate Technology Partnership grew from just an idea of landfill capture and utilization in 2002 and has since grown into a reality as Korea has developed a system of seventeen landfills which supply a newly created market of renewable energies.

Clean Energy to Green Hydrogen Cell Powered Cars

Some of this energy is used for the powering of green hydrogen cell powered cars. Of the four hydrogen fueling cell powered stations in Seoul, three of the stations rely on either city gas or liquefied petroleum gas to generate fuel. The remaining fueling station, located next to the Mapo Resource Recovery Center on Nanji Island, remains the only station of its kind in the world to obtain its hydrogen from the methane in landfill gas. The landfill gas creates 720 normal cubic meters of hydrogen per day, enough to drive a hydrogen-powered car 7,000 kilometers. (Xinhua)



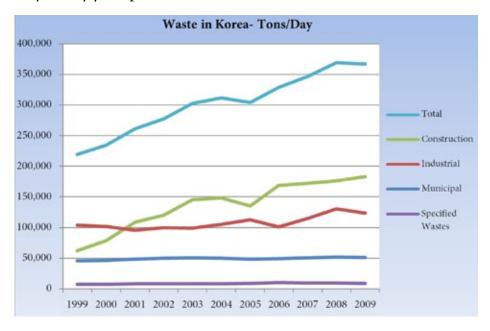
Collection and Recycling

Types of Waste Introduction

In Seoul solid waste is classified into four general categories: municipal,

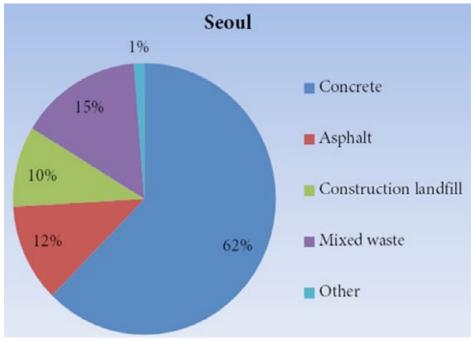
industrial, construction, or specified wastes. Municipal waste is generated by residences and is the most basic level of food and general waste. Industrial waste is usually produced in the manufacturing process. This waste is a more exotic type of waste than that normally generated in highly residential Seoul, but a shift to more high-technology industries from 1997 to 2003 affected the generation of waste even in Seoul. As a result, even as GDP growth over the period grew by 27%, industrial waste in Soul grew by 71% and hazardous waste by 31%. (OECD 23)

The third classification of waste has only recently become an issue in Seoul and Korea. Up until the early 1990s relatively little construction waste was produced compared to industrial or even municipal waste. Since however, waste generation from this sector has steadily increased and in 2001 it overtook all other sectors. By 2010, about half of all waste generated on the Korean peninsula (about 200,000 tons every single day) could be attributed to construction. This has become the most important factor of waste in Korea, a consequence of economic development and the urge to build large and luxurious condominiums in place of ones built only twenty years prior.





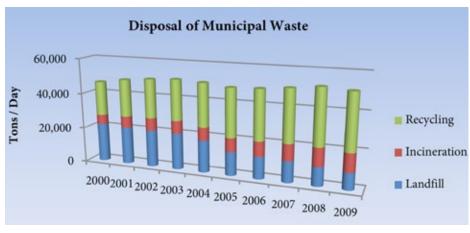
(Ministry of Environment 302)



(Ministry of Environment 302)

Disposal of Waste

The next best alternative to advocating less consumption is the creation of an efficient recycling system. Currently, Seoul residents of single-family homes separate recyclables by type in their homes and deposit them in designated place in their neighborhood or local recycling center. Condominiums and other high rise residents often have community recycling drop off centers in part managed by the housing authority. Such centers are found either outside or between apartment buildings and are even located in the parking garages of some more well-to-do condominium complexes. These collection centers are offloaded to local recyclers who further separate and process recyclables into raw materials again suitable for manufacturing. Unrecyclables are put back into the waste cycle for incineration. Thus, while overall waste generation in Korea has been on the increase, the amount landfilled has actually fallen year by year for over a decade.



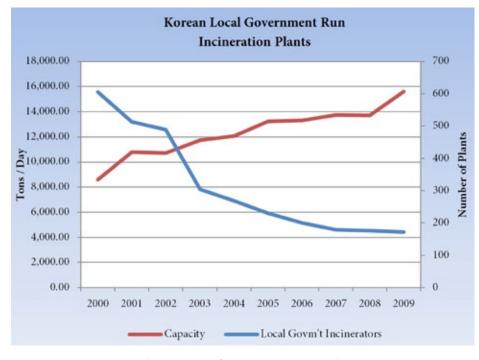
(Ministry of Environment 497)

Resource Centers / Incineration

<u>Introduction</u>

In addressing the components of the Green Vision 21 plan, we have seen how the plan effectively improved environmental quality in solid waste management in areas such as leachate treatment and gas recovery in landfills. Also targeted were the equipping of waste to energy incinerators with advanced processes. (OECD 43)

A shift in focus on waste as a fuel and resource for the creation of thermal energy is not new. There have historically been many incinerators in Korea. The problem was that a high number of these facilities had to be closed due to their high dioxin emissions. (OECD 84) Thus, incineration facilities were consolidated into more efficient plants and facilities.



(Ministry of Environment 499)

Resource Recovery Facilities

Hundreds of old, inefficient, and polluting incineration plants were consolidated into few more modern replacements. In Seoul, the planning and building of theses took an especially comprehensive and well planned path. While the Nanji Landfill site was still being utilized (1960-1995), the Seoul Metropolitan Government began working with the Incheon City Government and the Gyounggi Provincial Government to build a joint landfill to be the largest in the world. Seeing however that even a large

landfill such as that in Nanji Island could be filled in only fifteen years, the Seoul Metropolitan Government decided that it would be best practice to build several purpose built incinerators in addition to the metro landfill to extend the life of the landfill. This was the start of Seoul's Resource Recovery Facilities.

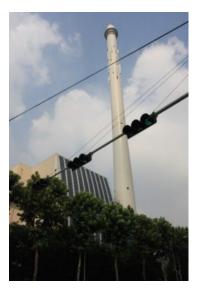


Seoul is organized into twenty-seven administrative districts or wards called 'Gus'. The original plan was to have a total of seventeen Resource Recovery Facilities to service them. (Sohn 14) This however, could not be realized due to residential opposition. There are therefore currently only five Resource Recovery Facilities here listed in build order: Yangcheon (400t/day), Gangnam (900t/day), Nowon (800t/day), Mapo (750t/day), and Eunpyeong (48t/day) Districts. Together, these five facilities have the capacity to incinerate 2,898 tons of municipal solid waste every day.

Yangcheon Resource Recovery- Site Visit

The first Resource Recovery Facility (RRF) built in Seoul was the Yangcheon Resource Recovery Site in December, 1986, in part modeled on the successes of similar facilities in Paris and Tokyo. Initially, the Yangcheon facility was neither efficient nor clean though it was refitted in the early 2000s with modern filters and other technological improvements. The Yangcheon facility produces 2,000 kwh (2,200 kwh capacity)

to make 40 Mw per day of which 20% is sold to power utilities. This is a result of fifty to sixty trucks carrying about 350 tons of waste a day being burned at 948°C so as to eliminate dioxins which break up at 750°C.



New Landfilling- Korea (Sudokwon)
Introduction

Korea as a nation began to realize by the 1990s that the way in which it had approached solid waste management in the past would no longer suffice for the large and developing cities and their growing populations. The goal was to work in line with the proposals of the Green Vision 21 plan to create a site which incorporated all lessons learned in the target areas of: landfill leachate treatment and gas recovery, efficient composting technologies, waste to energy incinerators with advanced processes, and the development of recycling technologies. (OECD 43)

TTo this end, while the Nanji Landfill site was still being utilized (1960-1995), the Seoul Metropolitan Government began working with the Incheon City Government and the Gyounggi Provincial Government to build a joint landfill to be the largest in the world starting in 1992. This site, would be run and operated by the Sudokwon Landfill Site Management Corporation, a central government-run agency, and named the Su-

dokwon (Capital Loop) Landfill Site a massive 6.2 million pyeong, 5,130 acre site in Incheon, Korea. (WohnDong-hee)

The Sudokwon Landfill Site is built on reclaimed land from the West Sea and is comprised of three sites. The first site was built up from 1999 until 2000. The second site, in use since 2000 and originally expected to reach capacity in 2016, has had its life extended until 2044 due to the 80% reduction of municipal waste volume due to the work of the Resource Recovery Facilities. This life extension has resulted in immense waste management savings as Seoul has claimed that building an additional landfill would cost at least 3 trillion KRW or 2.75 Billion USD. (KwonSang-soo) The first landfill site to the right of main number two landfill below has been set aside as a 'Dream Park' and will include facilities such as as a public golf course, sports facility, and parking lot. Some of these recreational facilities will be utilized for the ASEAN Games.



Recovery
Landfill Gas Capture and Utilization

The result of following the recommendations of the Green Vision 21 plan was the utilization of landfill gases for the creation of energy - energy creation far less expensive than true 'clean' technologies such as solar and

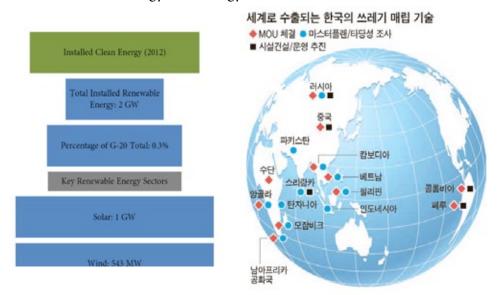
wind.

The result was a landfill gas collection system built systemically into the landfill itself so that it became more of a system with a landfill built around it. The result is a power generation plant that provides upwards of 50 megawatts of electricity. This capacity is expected to increase through efficiencies as the landfill flares between 20 and 25 percent of its collected methane gas.



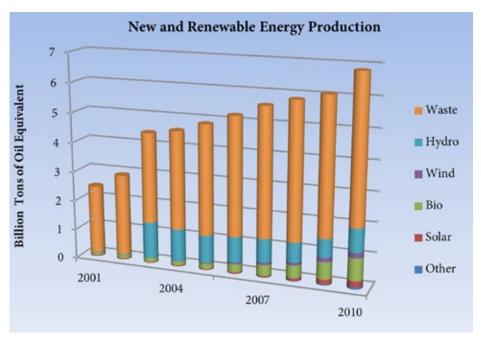
Exporting Technologies

Korea as a Clean Energy Technology Leader



(The PEW Charitable Trusts 45)

Even while Korea does not have a high level of installed clean energy according to many measures, the nation continues to advance quickly in applied technologies and methods in such areas as recycling, landfill gas utilization, food waste recycling, and fuel cell technology. The preceding figure shows that Korean central government run organizations such as the Sudokwan Landfill Site Management Corporation, hand in hand with the central government create Memorandums of Understanding (red), master plans (blue), and construction projects incorporating advanced technologies (black).



Conclusion

The Green Vision 21 plan, while addressing waste generation, primarily aimed to improve environmental quality in solid waste management relied on improving the level of technology performance in relation to integrated waste policy management. Areas targeted included: leachate treatment and gas recovery in landfills, creation of efficient composting technologies, equipping waste to energy incinerators with advanced processes, and the development of recycling technologies. While successful

in providing for a more sustainable and green environment in solid waste management practice, this paper recommends a return to the more foundational 3R's ought to now by advanced for a more effective and complete transformation of waste management in Seoul. We believe that this applies for both Seoul (developed) and lesser developed cities and nations.

Korea has shown that it is possible for a nation to develop in just a few years from one with no clear strategy for solid waste management to one which is forward looking, sustainable and green. Following the guidelines set forward in the Green Vision 21 plan, Seoul created a system in which waste was collected, sorted for the removal of recyclables, and then incinerated in Resource Recovery Facilities. Waste that cannot be incinerated is still buried in landfills, but even here the gas released in their decomposition is used to heat homes and stadiums, provide electricity for the population, and even to fuel cars.

Like the challenges facing most Asian countries, Korea needs to continue developing a comprehensive system that caters to a growing middle class and an aging population that has come to expect a greater degree of basic services including the sustainable management of solid waste and accessibility. Ideally, such services would at some point include the building of long-term infrastructure with consideration given to fiscal health, enhancement of resource efficiencies to improve the life of its citizens and the poor, and the promotion of the city's competitiveness.

In a look to the future, Seoul and the nation will need to move beyond the Green Vision 21 plan and its adopted waste policy which in many ways supplanted a focus on the traditional 3R's to managing waste as a renewable resource in energy harvesting. Even so, an increase in green investment in Korea by 50 percent in 2012 to \$900 million nevertheless saw Korea fall from 15th to 17th place in the G-20 in its renewable energy portfolio ranking. (The PEW Charitable Trusts 45) As a world class and a leader among the most populated of cities, Seoul has a responsibility to take charge beyond its national standards and basic obligations and become a city where burning isn't embraced as the cheap and easy solution but one solution among better more environmentally sound solutions -Reduce, Reuse, and Recycle.

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Release of 3 type pollutants into the

- I Heavy metals
- 2 Unburned to
- 3 New pollutar

Health Effects

- I Increased ca
- 2 Respiratory
- 3 Reproductive and ot



Research Papers

Transport Oriented Development as an Urban Green Growth Strategy: The Human Perspective.

Authors: Sun-young Park and V. Sayel Cortes Berrueta.

"Transport is the key sector in urban synchrony because it has a very strong effect in organizing the urban space through its link with the land use market" (Lefevre, 2013) said Dr Benoit Lefevre, from the World Resource Institute (WRI), referring to the basic essence of the link between movement and activity inside of a city. The most fundamental reason why humans gather together to form cities is to all benefit from the synergy of diverse activities being held together. However, as the city grows, urban mobility is one of the biggest challenges to this basic function of the city. Therefore the places where transportation and land use work together to develop that area of a city are of great importance. These places are what we call "transportation hubs"

This paper seeks to learn from Seoul's experience in urban development around transportation hubs. In order to do this we start with a brief literature review of the theory behind the urban-transport interaction. In the second section we go through the words of Korean public officials and transportation experts, both from interviews we conducted with them and from presentations they did, to better understand how this happened in Seoul. We pay special attention to the process that lead to an efficient public transport system that is one of the most important elements of Seoul's urban development and success. After reading and hearing from the experts, we seek a more subjective and social aspect by interviewing a few business owners in two iconic transportation hubs in Seoul: Gangnam Station, and Seoul Station. While Gangnam station is very new, and Seoul Station is one of the oldest in the city, in both cases, the surrounding neighborhood is very developed, so we believe these two examples let us look into how to use transport to promote development in new as well as old neighborhoods. The perception and stories of the people who work near the subway station give us a soft, but very

important, aspect of the consequences of development: how it affects people. Finally we try to draw some conclusions and recommendations from analyzing the development around these 2 transportation hubs from the 3 elements mentioned.

Transportation and Urban Development Theoretical Background

The link between urban development patterns and individual trips has become a hot topic in urban planning as evidence from its interaction has been found both in developed and developing countries (CTS México, 2010). This is relevant to government officials as urban policy is easier to implement than transport policy. By better understanding the link between these two sectors, urban policy can be used as a tool to achieve sustainable urban transport, while at the same time generate many positive externalities for local development. There 's actually a vicious cycle identified in cities with mobility problems (Kim, 2013)

Increase Traffic -> Need More Road -> Urban Sprawl-> Need More Car -> Economic Growth -> Increase Traffic...

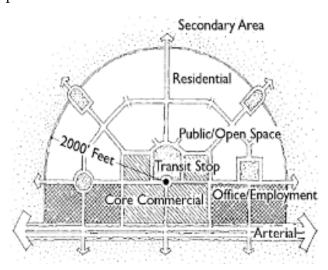
This vicious cycle based in private car mobility leads to an endless waste of resources such as space, energy, and time, which has been lowering the quality of life in many of today's middle and big cities around the globe. This also leads to decreased urban productivity as the city can't function as efficient as it should. On the other side, if urban and mobility patterns are developed together they can lead to sustainable growth in cities and improve mobility. Opposite to the previous case, this will lead to a virtuous cycle (Kim, 2013):

Sustainable Growth & Mobility Improvement -> High Energy Efficiency -> Low Fossil Fuel Dependency -> Energy Security against High Oil Price

-> Reducing GHG & Pollutants -> Sustainable Growth & Mobility Improvement...

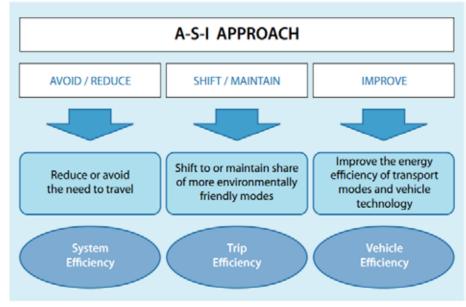
In this case the externalities become positive by promoting vibrant communities that lead to an increase in local economic activity, public spaces use, social interaction, among other environmentally friendly benefits. The overall result is an increase in the quality of life as can be linked to the increase in real estate prices in such areas.

Several urban planning theories in the last few decades have emphasized the role of mobility in vibrant cities. Among these, the most relevant theoretical concept for this study is Transport Oriented Development (TOD) which states that city centers should be built within walking distance of a transportation hub and therefore bringing all the daily life needs inside that range and allowing for people to use public transport to reach places further away in the city. The objective of this is "to create livable environments where people can access transit arteries to employment centers, services and shelter with minimal use of cars" (Cunningham, 2012). This comes from the realization that private car movement is a very inefficient use of space and energy, and thus more sustainable transportation modes should be promoted.



Prototype of TOD according to Peter Calthorpe, quoted by CTS Mexico, 2010.

Following these lines the Avoid-Shift-Improve (ASI) approach was developed as a way to prioritize and plan transportation and land use. According to this model the first thing to do to achieve sustainable mobility is to Avoid trips as much as possible. The next step is to Shift travel to more sustainable modes such as public transportation, walking or biking. The last element is to use technology to improve the modes of transportation so that each vehicle becomes more efficient.



ASI approach, diagram taken from GIZ's Sustainable Urban Transport:
Avoid-Shift-Improve (A-S-I)

This approach can be applied to improve transport through urban policies because land use planning defines the origins and destinations of people inside of a city. By this logic, if the common places where people should go are located close to residential areas a lot of trips could be reduced in length or avoided (Avoid). Furthermore, by having an efficient public transport system near residential and employment areas, people might prefer to use public transport instead of private vehicles (Shift). Finally improving the quality of sidewalks and bus stops etc. would make mobility more convenient and improve the quality of the trips performed

around an area (Improve).

The challenge of this is to find the proper way to implement it, since it requires the coordination of diverse public and private actors. Furthermore the timing and coordination of each policy is important as many of these depend on each other to bring about the desired results. South Korea has already gone a long way to implementing this in different context as shown by KOTI Knowledge Sharing Report, "Korea's Best Practices in the Transport Sector, Lessons from Transition in Urban Transport Policy" where case studies of TOD, Bus Transfer Centers, BRT, Bike System, Electric Vehicles and others are presented. The next step is not to limit ourselves to hard numbers but to also hear how people near these transportation hubs have seen their business affected; to get a broader picture of these policies and their role as urban green growth strategies; and perhaps more importantly, to get some useful recommendations for developing countries from the Korean experience.

Seoul's switch in transport policy

Seoul's urban transport policy followed a similar path to other developing countries during the second half of the 20th century. From 1974-1999 the focus was in building infrastructure such as roads, subways and parking lots (SMG, 2013). In the 2000s the focus changed with a Public Transport reform from 2000 to 2011 that improved the quality and efficiency of public transportation by expanding the exclusive median bus lane, implementing an integrated transfer system, and upgrading the subway service (SMG, 2013). Currently, after 2012 there was a new shift towards a "Human-oriented transportation" that emphasized having safe, convenient transportation for the disabled; a pedestrian-oriented transportation environment; and low-cost, high-efficiency operation systems (SMG, 2013).

By 2004, Seoul Metropolitan Area (SMA)was facing the same challenges that many cities in developing countries do now: increasing car accidents, increasing congestion costs, no space for more roads, and the increasing costs of building infrastructure (SMG, 2013). A 2004 reform in public transport in SMA aimed to create a Sustainable Transport System by im-

proving public transport, implementing new information and communication technology, and revitalizing declined central business districts (Kim, 2013). In order to achieve a sustainable transport system, 7 keywords explain the values used in Seoul to promote public transport (Kim, 2013):

- 1. Connection: A hierarchical structure in the transport system including feeder, transfer facilities, and trunk lines increases the efficiency of the system and allows for a better coverage than the previous point-to-point focus.
- **2.** Speed: By providing Bus Rapid Transit (BRT) systems to increase the speed of public transport with policies such as exclusive bus lanes.
- **3.** Information: The Bus Management System (BMS) implemented relies on real-time information about the bus to give information to the user and to improve bus management and general efficiency.
- **4.** Smart: The integrated fare system tracks the trips and allows a pricing policy based on distance traveled.
- **5.** Affordable: Transfer discounts have been implemented to benefit users and allow a better integration of different transportation modes.
- **6.** Transfer: Convenient public transit transfer centers links subway, buses, and trains.
- **7.** Comfort: Bus stops and buses have been improved to be comfortable to attract passengers

The result was an increase in the use of public transport (subway and bus) from 53.6% to 57.1% from 2006 to 2010 in Seoul and neighboring cities with an increase in passengers from 9.3 million per day in 2003, to 10.4 million per day in 2010 ((Kim, 2013), (SMG, 2013)). There was also a decrease in bus accidents from 659 accidents per month in 2003/2004 to only 384 in the first half of 2010; however perhaps the most important

indicator of success is the improvement in citizens' satisfaction which increased from 22.4% in 2004 to 72.2% in 2010 (SMG, 2013).

However, by interviewing Mr Gyu-Ryong Kim, Deputy Director of the Transport Division at Seoul Metropolitan Government, we learn that the process to achieve this hasn't been easy. He mentioned there have been two main problems to developing public transportation in Korea: finances and inefficient infrastructure. When South Korea was still a developing nation, it was faced with a road system which created traffic problems that busses couldn't solve. The solution was to build a subway system. This lead to the second challenge: the financial one. To overcome this limitation, Seoul City issued public bonds following the logic that future generations will also use the subway system; therefore, future generations can also be responsible of paying for it. This provided the money to build up the system in the first place, however that was not enough to make the system sustainable from an economic perspective. Therefore, to counterbalance the constant deficit in the subway system, Seoul City has used some approaches to complement the use of public bonds. One of the most important was to open the system to investment from private companies - in this way Line 9 was constructed.

A second source of income, which is more related to the topic of this paper, is to rent the area around the subway station. Since the subway station will bring people to an area, the value of the land around it can be increased with a proper development. Renting this space to private companies allows Seoul City to catch some of the profit generated by the subway station. Furthermore, in this scheme, private companies support on the renovation of the area in the station and around to support their business. In this way, Seoul city is killing two birds with one stone.

However, the public-private cooperation is not limited to Line 9 - Seoul City buses have always run by private bus companies. However, as in many other cities, there were a lot of inefficiencies in the way buses were organized. A reform made in 2004 changed drastically the way busses worked in Seoul. To make private bus owners comply with the reform, Seoul City raised the drivers' wages and welfare to accommodate their needs while at the same time providing more efficient and comfortable

public transportation for citizens.

To increase control and coordination, Seoul City established policies and routes for the busses which the private bus owners had to follow. Furthermore, buses were integrated with other transportation means by the use of T-Money card which allowed for discounts when transferring from one system to another and thus improving the way users could travel around the city. As shown in the next diagram, the government controls the policy, the money, and the information from this system by being between the two private participations: on one side the company that manages T-Money, and on the other the companies that run the transport system. While sometimes the government has to give some subsidies to compensate from the discounts they offer to seniors, children, and students; the information of people's trips can be used to improve further planning of the system.

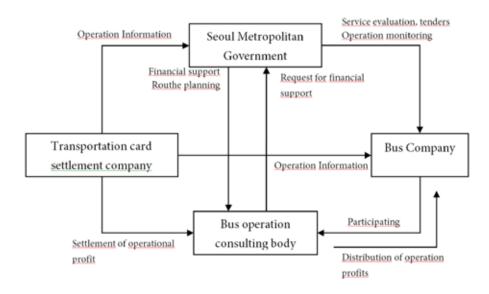


Diagram adapted from Seoul Metropolitan Government, Sep, 2013

Finally, to promote urban-transport integration Seoul City made Transport Policy a priority in its Urban Planning. In this way, the city is developed in a manner which takes into consideration the transport system

and allows for multiple synergies among them. The urban planning process doesn't include the private sector per se, but the government takes suggestions from the private sector and allows them to participate in specific issues, such as the public transportation system. This is not enough yet, and Seoul City is always trying to improve the transportation system. After the shift from private automobile to public transportation promotion, the challenge to switch to a more human-oriented system that also cares more about the environment is the current task. Building more infrastructure in a city as crowded as Seoul is really hard, so by maximizing the use of Information Technology and by improving the quality of the existing infrastructure, Seoul City keeps improving its transportation services for people's convenience.

<u>Social perspectives on the evolution of transport – Seoul Station and Gangnam Station Cases</u>

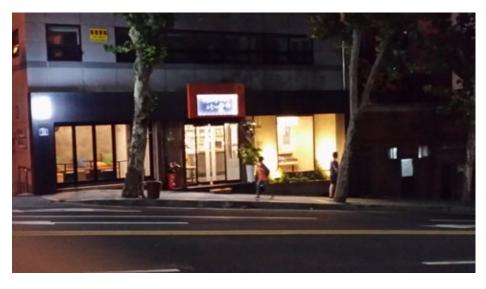
To look at the social perspective of Transport Oriented Development, we visited and interviewed businesses at Seoul Station, one of the biggest and oldest transportation hubs in Seoul. One interesting feature of this station is that around it coexist a developed area to the east of the station and a less developed area on the west. Furthermore, the east side includes the main entrance of the station as well as an important group of bus stops. The area to the west of the station, which could be considered behind the KTX station, is notably less developed. While in front of the station there are several big office buildings, the area behind is a residential area with few recent constructions. This is but one piece of evidence of the relationship between transportation hubs and urban configuration. To better understand this, we go deeper in Seoul Station history and the opinion of the people working in the area in the following paragraphs.

Seoul Station was built in 1900, but it had different name, Kyoungsung Station for Kyoungbu line. Seoul Station has more than 100 years of history as the gateway for trains going all over Korea. Currently the station has a new building, but before that Seoul Station was already recognized as historical site number 284 because it is one of the best buildings in Korea since the Japan Empire period. The old building has been renovated

and currently holds public exhibitions that allow visitors to also enjoy its remarkable architecture.

On April 10, 1984, "on the use of state-owned assets law" was enacted and promoted as the railway business unit. The need of private construction projects rose in accordance with the rapid economic development and the expansion of urban development around the station. The modernizing station facilities project was propelled to provide quality and convenient services to people. A new private station was built in 1989 by Hanwha Station Corporation, but it was reversed with free of charge to Korail later on. When the KTX line was opened on April 2004, Seoul City privatized Seoul Station as a consolidated station. With the renovation into the Seoul Integrated Privatized Station, it became the starting and the last train station of KTX, Kyoungbu Express train line, Kyoungbu General Line (Mugunghwa, Saemaeul) and Kyoungeui line.

Since Seoul Station has a long history that can be seen as the interaction of two parts: old and new. To take this into consideration we interviewed two businesses in the area around Seoul Station: a new café that was built just a month before our interview, and a bookstore built 28 years before. The first interview was with the owner of "Sommelier Who Love Coffee" which was inaugurated just one month before. The owner told us that she lived in this area for more than 40 years so she felt that it would be great to open a business. She mentioned that it was not a good location just because of Seoul Station, but also that nearby Namsan Mountain attracts a lot of people. Furthermore there are big companies moving to this area more and more, which helps to attract more customers. One of the interesting things she told us was that she does not think the public transportation hub has positively affected business as much as Seoul Station did in the past. Before, Seoul Station was the only central transportation hub thus many people came to go to the Southern area of Korea or to other places. As they had to kill their time around the station in order to catch the train it was a good spot to have business. However, Seoul Station does not have every train line anymore, Yongsan, Chungryangri and other places took express bus terminals and train stations, which has decreased Seoul Station's position as a central transportation hub. Howindicator of success is the improvement in citizens' satisfaction which iever, it still has an important function as a transportation hub, mainly for its central location, but it's less important than in the past and it has turned more into a transfer point between different lines and not so much a place where people wait for their next train. Still, since Seoul Station has many buses and lines, many enterprises have offices around this area which keeps the economic activity high. For this reason, she does not think the existence of transportation hub would make a big difference for her business.



Sommelier Who Love Coffee, a new coffee shop only a few blocks on the East side of Seoul Station

Her comments are interesting for us as it seems there's both a direct and an indirect effect of transportation hubs on economic activity. At the beginning the transportation hub brings people to the area which promotes its development (for example promoting companies to have buildings nearby as in this case). Over time however, the transportation system keeps expanding and thereby reducing the relative importance of any specific transportation hub. However, the business previously developed in the area sustains the local economic activity and the importance of the area remains high at least for a while. It is worth mentioning that, despite

its age, Seoul Station area keeps renovating itself with the new building and a big conference hall planned for the next few years. These urban improvements and trip attractors are needed so the area doesn't lose competitiveness against newer developed neighborhoods.



Train Bookstore opened around 1985 is one of the oldest businesses inside Seoul Station

The second interview was with a worker at Train Bookstore. This store is located right next to the subway gate and also train transferring area. The worker of this store thought it opened in the station because of the vast number of passengers that were here to take the Honam line, Youngdong line and many other lines and buses. Therefore many people brought books whilst waiting for their train. So the huge flow of population can indeed generate business opportunities. However, due to the separation of train lines and other means of transportation to other stations, this has decreased recently. Also the times change, so these days when people are waiting for their trains they are more likely to be watching one of the TVs in the waiting area or on their cell phones. Following the idea of the direct and indirect effect of transportation hubs, over time the changing preferences of people and changes in the transportation system affected the economic opportunities near the station. New business are still being

created (recently an outlet shopping center opened in Seoul Station new building for example), however the tastes and preferences of people in the station are different and thus businesses have to adapt to benefit from them.

The second place where we did an interview was around Gangnam station. This is a very big and new station. Gangnam Station has the most number of users now, however the area was previously called Youngdong because it was located the east side of Youngdeungpo. This area used to belong to Kyounggi-Shi Kwangju-Gun and it was just a farming rural area completely different to what it is today. At that time no one valued this land, which people called "the land that cannot be used for anything which is located the east side of Youngdeungpo." However, as Seoul's population increased in the late 1970s, the government tried to disperse population. The result of this was enlarging Seoul province by taking part of the Kyounggi area. Especially after the construction of Hannam Bridge and Kyoungbu express highway, it became easier to access Junggu and Youngdeungpo, which evolved into a huge developing project. The huge construction was finalized in the 1980s with the current Line 2 Gangnam Station opening in 1982. It took only 30 years to becoming such an important transit hub and to develop the area into such an advanced business district.

Near Gangnam Station we interviewed a corner restaurant called Motungi sikdang (모퉁이식당). We selected this type of snack restaurant because it was opened in 1988 when Gangnam was still not very developed. This restaurant is not the fancy restaurant typical of current Gangnam Station area but a small place attended by two Korean ladies where people stop for a quick bite. Despite the place changing owners around 2 years ago, she was able to tell us some interesting information because of her experience in the business and because she lived in the area before. One of the most surprising elements that she mentioned was that it was not Line 2 that brings most of her clients, but the Bundang line because it connects with residential areas. This seems to mean that while the vibrant life of Gangnam attracts people from all over Seoul to its many trendy places, places that last a long time are probably more convenient than "in"

and thus their clients are people who have easy access to the area from their homes or places of employment.

Conclusions

South Korea's quick development during the second half of last century took it from poor to developed in one generation. As the only country that has done that so far, there are plenty of experiences which other developing countries can learn from. In this paper we focused on the experiences of Seoul using urban development in transportation hubs to generate local economic development. More than confirming that Transport Oriented Development (TOD) theory was applied with good results around Seoul Station and Gangnam Station, this paper aimed to get stories from people who were part of this transformation, both from the government and from the perspective of users. More than repeating the lessons found anywhere else in implementing TOD policies (for good examples from the Korean experience see Lessons from Transition in Urban Transport Policy by KOTI), we will try to add to these with the input of people being part of the change.

From the government perspective what is clear is that a planning procedure that includes both urban and transport policy needs to be in place to be able to materialize the benefit from the synergy. Seoul did this by making transportation a priority in the Urban Plan. Once this is in place, an effective cooperation with the private sector and creative ways of funding are needed to push economic activity and for the government to then catch some of the earnings from it. Rather than using only the increased tax revenue, Seoul Government implemented other methods, probably the easiest is to buy the land around the station and rent it to private enterprises which would develop and use it. In this way, the government gets profit from the increase in land value and doesn't need to worry about the economic development itself, however other public-private partnership schemes can also be developed.

One key lesson for successfully developing the area around transportation hubs is to promote access to the area to a diversity of people. Two ways of doing this was identified in Seoul. On one hand, the construction of inter-modal transportation hubs as well as the integrated payment system encouraged people to use both subway and busses to access the important transportation nodes. The second area is to provide a diversity of trips attractors in these areas, as can be seen from Gangnam office buildings, trendy restaurants, stores, etc.; and as it's still being promoted in Seoul Station with the construction of two shopping malls in the station (for high and low income levels), office buildings and restaurants around, and the future construction of a big conference center. These two policies together can bring the people required to improve the economic activity of these centers both by making it easy to access them and by giving people reasons to go there.

From the users' perspective, it is important to think of the reasons why people would go to the transportation hub. None of the workers interviewed mentioned the transportation system as the source of their clients, but they rather mentioned some indirect effects of it. Either waiting for the next train, going to work, hiking or lunch; people need a reason to be in an area in order to consume there. Therefore the businesses in the area need to be compatible with each other - as can be seen in Gangnam where high end and low budget restaurants both benefit from the surrounding office buildings by attracting different kinds of people. Shopping malls, mixed use roads and high density office buildings can all work together if the people they attract are similar so that one can benefit from the other. This complex interaction among land uses can be hard to plan but giving the right incentives it can be developed in a relative short time (less than 25 years in the case of Gangnam for example).

The general conclusion of this study is that both for the implementation and for the success of transportation hubs as an urban green growth strategy it has to be focused on the human level. No matter how sophisticated or simple the technology is, the key point is to make it easy for the people to use it. Furthermore, the urban development around a transportation hub has to be made in such a way that it "makes sense" for people to go there. Because of this, building vibrant TODs is both a challenge and an opportunity not only to engineers, but to managers, designers, architects,

law makers, politicians, business owners, etc. - a shared challenge to bring benefits to everyone.

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Research Papers

Multicultural Education in Seoul, South Korea: A Critical Review.

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Abstract

The aim of this article is to examine the goals of multicultural education practices in Seoul, South Korea. The concept of multicultural education has yet to be concretely defined by academics, government officials or practitioners alike. Defining the term is of great importance as it is instrumental to the implementation of multicultural education policies and practices. As there is an increase in immigrant population in South Korea, a comparable increase is also observed in multicultural children in public elementary schools. With the use of empirical data, elements of multicultural education are analyzed highlighting multicultural education policies implemented in Seoul public schools, with special attention on specific programs launched at Itaewon Elementary School providing inferences on the progress of multicultural education programs in Seoul public schools. Lastly, we will analyze and criticize these policies and suggest possible guiding principles in an effort to make more balanced and efficient multicultural education programs. The implication of this study is that multicultural programs achieve effectiveness and efficiency when bureaucrats and executors work together with common goals, program knowledge and understanding as well as acknowledgement of all areas affected.

Key Words: Multicultural Education.

The Korean society is going through a radical change in its demographic diversity. The foreign population doubled from 2007 to 2011 . Accordingly, there is more than one multicultural student in the 7,989 elementary, middle, and high schools, which comprise 71.8% of all schools in

South Korea. Multicultural children are divided into two main categories; those who are born between foreign parents and those born between a Korean parent and a foreign parent, who comprise the majority (94.5%). Especially, the female "marriage immigrants" (spouses to Korean citizens), comprising a large proportion, are said to have difficulties in the education of their children considering their lack of knowledge of Korean language and culture. Thus, these children tend to have only a limited number of educational opportunities which result in low learning achievements. (박채형 151)

The law that supports the education of multicultural children, 'Multicultural Families Support Act', was first implemented in 2008. If we were to focus on the 'multicultural education' part, the law specifies the necessity of education for multicultural children and marriage immigrants focusing on Korean language and vocational education. On the other hand, multicultural education for Koreans is suggested to be done in the form of promotion and the multicultural understanding program 'in order to prevent social discrimination and prejudice and to respect the cultural diversity'. Still, we put a greater emphasis on the former and this focus functions as a basis for diverse multicultural policies implemented in governmental agencies, for example, the Seoul Metropolitan Government.

Definition of 'Multiculturalism'

Defining the term 'multiculturalism' encompasses a plethora of factors. Depending upon one's approach, being demography, ethically, or with mutual benefit, its meaning can altered. Banks and Banks (2001) define multicultural education as: An idea, an educational reform movement, and a process whose major goal is to change the structure of educational institutions so that male and female students, exceptional students, and students who are members of diverse racial, ethnic, language, and cul-

tural groups will have an equal chance to achieve academically in school (p. 1). They further explain that, "the term multicultural education describes a wide variety of programs and practices related to educational equity, women, ethnic groups, language minorities, low-income groups, and people with disabilities" (p. 6). Multicultural education is not defined only on the basis of classroom curricula, but also on the basis of leadership. Gay (2000) and Ladson-Billings (2004) defined multicultural education as adopting a culturally responsive pedagogy with trained instructors facilitating it. Nieto (1996) defined multicultural education as "antiracist education" which is "a process important for all students" (p. 307). Jay and Jones (2005) defined multicultural education as "the common term used to describe the type of pluralist education" where "its advocates are seeking for all children receiving an education, pre-K through college" (p.3). The National Association for Multicultural Education (NAME) described multicultural education as a "philosophical concept built on the ideals of freedom, justice, equality, equity, and human dignity as acknowledged in various documents, such as the U.S. Declaration of Independence, constitutions of South Africa and the United States, and the Universal Declaration of Human Rights adopted by the United Nations" (National Association of Multicultural Education, 2011). Kahn (2008) described multicultural education as a "process, a philosophy, a concept, which is dynamic, multifaceted, and polemic" (p. 531). Margaret Gibson (1984) produced five approaches to the subject by integrating culture with education. The five approaches include: (1) Education of the Culturally Different or Benevolent Multiculturalism. The purpose of multicultural education is to equalize educational opportunities for culturally different students. (2) Education about Cultural Differences or Cultural Understanding. The purpose of multicultural education is to teach students to value cultural differences, to understand the meaning of the culture concept, and to accept others' right to be different. (3) Education for Cultural Pluralism. The purpose of multicultural education is to preserve and to extend cultural pluralism in American society. (4) Bicultural Education. The purpose of multicultural (or bicultural) education is to

produce learners who have competencies in and can operate successfully in two different cultures. (5) Multicultural Education as a Normal Human Experience. The fifth approach begins with the key concepts of education and culture, drawing upon anthropological definitions (p. 95). Although there are a variety of definitions of multicultural education from various contexts and implementations, there is no clear definition of the term.

Overview of multicultural education policies thus far

With an effort to handle migrant workers with inclusion as opposed to exclusion during the Roh Moo-hyun administration (2003-2008), the idea of multiculturalism "became an important part of policy dealing with foreigners in Korea, particularly focusing on measures to help multicultural families and their children (Kim, p. 115). The issues tackled in the programs are various; improving multicultural awareness, understanding foreign and Korean cultures and languages, and supporting multicultural students' academic achievements.(박자형 153) The programs especially target elementary school students, since 74.1% of all multicultural children enrolled in schools are in that level.³

According to our interview with the officials in the Division of Multicultural Families in Seoul Metropolitan Government, we found out that they support the language education (Korean and the mother tongue) for multicultural children in four target schools; Itaewon, Youngil, Bokwang, and Gunja Elementary Schools. In fact, the official multicultural education program in targeted public schools in Seoul is largely divided into two programs; one run by Seoul Metropolitan Office of Education named, 'Global Leading School of Multiculturalism' and the other run by Seoul Metropolitan Government, as mentioned above. The latter is focused on language education and the former on diverse after-school programs including languages, arts, culture, and sports classes. "The reason that multicultural education policy has been mainly handled by these two organizations is because of "a sufficient budget to deal with this matter (in the case of Central Government)" and "the need for change in schools (in the case of District Office of Education)" Cho, p. 22). This division into two programs, although it could be problematic with overlapping class con-

¹ 다문화학생 교육 선진화 방안

²Multicultural Families Support Act Articles 5 and 10

³ 다문화학생 교육 선진화 방안

tents, still seems to have positive aspects in offering diverse opportunities for students. Overall, these specific multicultural education programs are in line with the aim of the Multicultural Families Support Act, which is to help multicultural children better adjust in school and society through Korean language and culture programs.⁴

The multicultural education policy within Seoul claims to pursue balanced objectives targeting both multicultural and Korean students, thereby fostering mutual understanding and encouraging the development of diverse identities. However, it has received a number of criticisms from scholars, depicting the contents as assimilationist policies with emphasis on acculturating the multicultural population with Korean ethnic characteristics, including language and manners. For example, in the 'the Advancement Plan of the Multicultural Education Policy' in 2012⁵, the newly introduced policies still seem to put more stress on the Korean language program for helping multicultural children adjust to schools⁶, rather than on improving the multicultural awareness of all students.

Furthermore, a study by Seong-Hyeok Park et al. in 2007 charts the multicultural education project outlining its goals and targets implemented by Central Government, Local Government, District Office of Education, and NGOs. This chart categorizes 198 policies targeting married immigrant families, immigrant workers families, North Korean defectors families, and Korean families, while the policy goals were categorized as Multicultural Education, Public Health & Welfare Support, Legal Assistance, and Mutual Understanding (Cho, 2010).

< Table > Frequency distribution of multicultural project by goal and target

<Unit: (%)>

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Goal	Multicultural Education	Public Health & Welfare Support	Legal Assistance	Mutual Understanding	Total
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Married immigrant families	43	14	10	25	92(46)
Immigrant worker families	35	8	7	25	75(38)
North Korean defector families	6	2	0	3	11(6)
Korean families	9	2	0	9	20(10)
Total	93(47)	26(13)	17(9)	62(31)	198(100)

From this fact, we can assume that this multicultural education has the strength of targeting limited groups, with its goal on 'adjusting to Korean society'.

It is true that the government is altering its policy objectives to foster the coexistence of diverse cultures, rather than assimilating the immigrant population into Korean society. According to our interview with Seoul Metropolitan Government, the targets for multicultural education have widened, even including Korean citizens not directly related to a multicultural family, and they are also giving more attention to improving the multicultural awareness of Korean citizens via various campaigns, festivals and community sports programs. These programs aim at a better 'social unification', which is one of the main policy directions of this local government. And in the 'Advancement Plan of the Multicultural Education Policy' in 2012, it is specifically mentioned that multicultural education should be for all students and suggests providing more multicultural-friendly textbooks and after-school programs for broader groups of students. Yet, since the program is still at the beginning phase, Korean children and citizens still lack the opportunity to be part of programs encouraging mutual understanding and assistance in perceiving the increased diversity in a positive way.

Helping the immigrant population better adjust to the Korean society would be important, especially for social integration. However, multicultural education for the whole population, which is still proportionately minimal, should be further strengthened since the impacts of the changing demography will affect the whole of society rather than the limited population.

⁴ In fact, 63.4% of multicultural education programs of target schools are constituted of Korean language and culture programs and the effort for improving and resolving other issues remain only at 10%. Also, the programs for mutual understanding among multicultural and Korean children are mainly one-time experiences such as field trips. (박채형 153) Even the programs of mutual understanding do not seem to go further than simply introducing different cultures.
⁵ 다문화학생 교육 선진화 방안

⁶For example, the government introduced the KSL (Korean as a second language) program and pre-school programs for language and cultural education.

Multicultural Education in South Korea

Although it is clearly shown on various government websites and promotional outlets that multiculturalism has become a 'hot topic', it is unclear how well their implementation of this issue is portrayed. Recognition of the aforementioned step to promote awareness to the current population growth and change in South Korea is needed. Around the country and especially throughout the city of Seoul, an abundance of centers have been created in an effort to aid the lives of foreign citizens and families. These multicultural centers offer Korean language courses, translation, culture/ cooking classes and handicraft activities in order to provide exposure to those of varying ethnic backgrounds. Places such as the Seoul Center for Culture and Tourism advertise these courses to promote cultural diversity in Seoul through events for multicultural families and educational programs to eliminate cultural prejudice⁷. Global Centers have also been established extending similar care and resources to this multiethnic cohort. For example, the Yongsan Multicultural Center is a resource to educate wives of Korean men on Korean language and culture. It also offers similar classes for children and social groups for multicultural women in order to better cope with living in South Korea. Education is at the core of these centers of multiculturalism; however, defining this term has become a bit of an anomaly. Praise must be given to the Seoul Metropolitan Government for their efforts to establish and promote awareness of the issue of population changes in South Korea. Providing a space for multicultural and multiethnic women and families residing in the country illustrates the federal government's recognition of the transformations occurring within and proactive steps allowing for this cohort to adjust and adapt accordingly. The matter in question is 'has this multiculturalist agenda fostered applicable results for natives to adjust and adapt?'

The primary focus of these multicultural centers and agendas is directed to that of the spouse as opposed to the dominant class of natives and the children in public schools. The idea of assimilation as a means of multi-

⁷Seoul Metropolitan Government http://english.seoul.go.kr/lh/support/scof3.php ⁸http://www.intlalliance.org/fileadmin/user_upload/documents/Conference_2010/NP-KO.pdf ⁹http://www.intlalliance.org/fileadmin/user_upload/documents/Conference_2010/NP-KO.pdf

cultural awareness is vastly skewed foregoing the problematic interactions faced by this cohort on a daily basis. It is our belief that rectification of this issue is to begin in public schools as an outreaching effort to children as well as their families. The Seoul Metropolitan Government in accordance with the National Center for Multicultural Education has proposed a multitude of programs to adhere to the multicultural issues currently plaguing the country since the early 2000s. For example, 'The Act for Protection and Support of Immigrant Families,' intended to provide a compulsory multicultural education and government welfare for immigrants by marriage, 'The Act to Support Inter-Racial Families' requiring schools to provide them with education based on anti-discrimination and non-prejudice grounds, and 'The Multicultural Families Support Act requiring members of multicultural families to learn the Korean language and to be educated for social adaptation. Additionally, the Ministry of Education and Human Resources Development announced 'The Plan to Educate Children of Multicultural Families' in 2006 and 2007, urged its implementation, and revised National Curriculum adding 'Multicultural Education' as a subject⁸. As it is a positive step towards the rectification of the multicultural issue, little has been witnessed as to the concept of multicultural acceptance. Full working knowledge of the Korean language is a major factor for all those living, working, and being educated in South Korea. It is the dominant factor leading to the problem of international/ multicultural students being ostracised from their classmates. In terms of the cause of group alienation in school, first, 'language barrier (56%)' was the highest, followed by 'poor grades (16%),' 'teasing, assaulting, and trouble in relationships (12%), and 'hard making friends (8%)9. However, it is our assertion that further importance placed upon multicultural acceptance would dramatically change these figures. Instituting better and more efficient programs similar to those that were proposed in the early 2000s primarily relating to multicultural education to the general population of South Korean public schools, would lead to this victory. Opening the door to South Korean youth regarding these issues has a trickling effect to their families, social groups, and respective communities.

Furthermore, as the current multicultural policies and programs in place in South Korean society today are geared towards the Asian spouse of a

Korean man to learn the Korean language and assimilate into the culture, little concern is taken regarding the native identity of the child. Upon further research at multicultural centers as well as interviews conducted with Seoul Metropolitan Government, a multitude of cases have been recorded where the foreign mother is forced to omit her native tongue from her household. Fear of isolation of the child due to a lack of Korean language proficiency, leads to an inadequate educational support system needed in the home to foster positive mental health, wellbeing, and academic achievement. As the mother is not a native Korean speaker and the father is typically out of the home working, the necessary assistance needed to perform well in other subjects are negatively affected. Maintaining the mother's native language and culture in the home creates a bilingual household and therefore, a better relationship with each parent. Of course assistance in Korean language, speaking and writing would need to come from an outside source; however, international subjects such as mathematics can be honed and nurtured.

Another adverse effect of the current policies in the identification and definition of multiculturalism focusing on marriages of Asian women married to Korean men is neglecting the existence of migrant workers. Here a noticeable difference is observed in the challenges children of these families face. The students from international marriages indicated that Math (26.8%) was the most difficult subject, followed by Social Studies (22.3%) and English (21.5%). Among the students of foreign workers, on the contrary, Social Studies (25.0%) was ranked highest in difficulty, followed by Korean (21.8%), Math (18.5%), and Science (14.1%). In other words, the students from international-marriage families are having a hard time in school due to a higher level of math curriculum and a different culture rather than the language barrier. Children of foreign workers, on the other hand, face language and cultural barriers as the major obstacles for fitting in at school¹⁰.

More and more, children of multiethnic backgrounds lose sight of their history and ethnicity diminishing their ability to create an independent identity. This paves the way for issues in school promoting learning curves hindering academic potential, achievement and success. Multicultural education practices in school need not only include that of Korean language and culture courses, but also recognition and acceptance of the student's personal history as well. Through this method, multicultural and multiethnic recognition has a higher opportunity for success.

Interview on Multicultural Education at Itaewon Elementary School

Located in an area¹¹ with a relatively large foreign population, the children of this school tend to feel familiar with people from different cultures. Statistically, the school has about 12.5% of multicultural students, meaning that about fifty out of four hundred students are not Korean natives. Especially, during the interview, we found out that the majority of these multicultural children are born between foreign parents, whose occupations include ambassadors for example, rather than a Korean and a foreign parent, as in marriage immigrant families, the primary focus of Seoul Metropolitan Government multicultural program policies. With this particular demography, multicultural classes supported by Seoul Metropolitan Government are mainly concerned with foreign students from diverse cultural and linguistic backgrounds. Because these target students experience difficulties in Korean language, out of necessity, multicultural classes conducted are primarily geared to increasing Korean language proficiency.

On an administrative level, the school is designated as a target school for multicultural programs both by Seoul Metropolitan Government and Seoul Ministry of Education. In close relationship with these governmental agencies, the school effectively runs programs with much support. For example, bilingual teachers are selected by the government and teachers involved in multicultural education participate in special training courses offered by the Ministry of Education.

Specifically, the classes are divided into several parts; Korean class by a Korean native teacher for larger class sizes, and more intimate, small-sized Korean class instructed by foreign bilingual teachers. Also, teachers of each subject run supplementary classes for multicultural students with language difficulties, having difficulty with regular courses, especially

details about these KSL classes they conduct and also about other multicultural programs they occasionally run for Korean students.

For Korean native students, several times a year, bilingual teachers conduct an 'international / multicultural understanding class', introducing their own cultures, such as traditional costumes. Also, with the request from other homeroom teachers, they offer language classes such as Russian or Japanese. The teacher interviewed mentioned that these classes have positive effects in increasing the students' multicultural interest by stimulating their curiosity. Such occasions to actually encounter diverse languages and cultures are believed to provide a student with a more direct and effective opportunity to learn about multiculturalism.

Throughout our visit to Itaewon Elementary school, we could observe that multicultural programs, especially Korean language classes, contribute to integrating multicultural students into the school society with the help of the passionate bilingual teachers. However, since the school runs multicultural student-centered programs according to the characteristics in the students' demographic composition, Korean students can rarely participate in multicultural programs. It is understandable that the school has a great demand on Korean language classes, yet it can be inferred that the multicultural programs are composed of disproportionately disassociating Korean students from the overall program. Rare occasions of native participation include multicultural understanding classes conducted by foreign bilingual teachers several times a year and external multicultural camps where a handful of sixth graders might participate as camp leaders leading younger multicultural students. Of course, with the school located in an area where there is a relatively large foreign population, the school might judge that students' multicultural awareness would be naturally higher and thus deem multicultural education in school unnecessary. Still, as a school designated by both Seoul Metropolitan Government and Ministry of Education to be an exemplary school for multicultural

 12 Actually, the Ministry of Education suggested in 2012 to launch this program as a focal point of multicultural education but has not yet officially implemented the plan

education, effective use of this program should incorporate Korean native students.

<u>Korean Multicultural Education policy suggestion (1)</u> Suggestions of Efficiency

The institution and implementation of multicultural education in public schools is portrayed widely throughout the world. As immigration and promises of a better life and international employment prospects continues to rise, the concept of the efficiency these established programs should inhabit need to be analyzed. New federal policies and proposals are exchanged with little to no thought or care as to the most significant areas it will effect. Achievement of multicultural education requires considerable acknowledgement of those at the grassroots levels.

The process begins forthright from federal bureaucracy trickling down to the public organizations and schools; teachers, specialists, and volunteers; and lastly to the students. In our research, we feel efficiency and effectiveness of multicultural education comes directly from three main areas: teacher training, co-operation, and empowerment/encouragement. Without these aspects, the mere idea of achievement is lost.

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The concept of teacher training is not only in preparation for lessons within the classroom setting. With the continued growth of immigrants and multicultural families in South Korea swiftly being enrolled in the South Korean public school system, it is imperative to highlight and dissect teacher attitudes to the notion of diversity and multicultural education. It is here where lectures and academic tutorials may be found lost in translation to the non-monoculture student. "Few teacher educators

¹³We conducted interviews with two bilingual teachers each from Kazakhstan and Japan, one Korean national Korean language teacher and the teacher in charge of the overall multicultural education.

have prepared future teachers for the reality of teaching diverse student populations¹⁴. This observation is magnified in nation states like South Korea built on a homogeneous cultural framework. The downplay of the significant presence of diversity in the classroom presents a major issue in multicultural education. Should teachers become blind or ignorant to the notion that race, culture, and ethnicity play a significant role in education practices and processes leads to an inevitable failure to properly and adequately meet the needs of those students thereby promoting future academic hardships. Unfortunately there is little empirical research in this area; however, Sleeter's (2008) observations on white pre-service teachers' 15 attitudes on these issues are useful here. For instance, she found that white pre-service teachers, as members of the dominant group, did not recognize racial inequity as a major problem in today's schools. Also, they placed the blame for academic difficulty on the students of color and had lower academic expectations for them. Third, they preferred a colorblind approach to teaching and underplayed the significance of race. Lastly, many of them normalized their own culture, using it to compare and contrast others. Regarding pre-service South Korean teachers, Sleeter's (2008) finding suggests that, as members of the "we Koreans" group, they are less likely to recognize the problem of inequity facing multicultural students and more likely to hold oppugning views and lower student expectations. They are also less likely to consider "we Koreans" as a problem and more likely to locate the problem on the multicultural students' differences¹⁶.

Co-operation is the second key ingredient to ensuring efficiency in multicultural education programs in South Korea. This multilateral partnership encompasses students as well as insiders and outsiders to work together creating unity and cohesion. As addressed in the multicultural programs at Miwon Primary School, students of various ethnic backgrounds were placed in small groups to work on projects relating to everyday life experiences. Academic assignments as well as integrated sports activities presented a mutual interest promoting real interaction. A study of an after-school project with Puerto Rican children in New York City found that co-operation between the students fostered new relationships placing the issue of multiculturalism into context. "The students themselves pointed out the importance of co-operation. The project supports

the idea that cultural identity should be looked at not as a core but as a relation between person and context, so that cultural identity is situated and context-dependent"¹⁷. These small group settings made way for personalized interaction allowing the participants to become more aware of the similarities between the two cohorts as opposed to focusing on the differences. Furthermore, the inclusion of a multilateral effort of insiders as well as outsiders promotes efficiency as well. Creating awareness and inclusion in the surrounding communities of Seoul public schools aids in the practical use of multicultural education. The factors of a student's daily life play a major role in his/her ability to cope and withstand his/her academic surroundings. Creating an environment for the student to fully concentrate both inside and outside of learning centers further motivates study efforts and enhances potential academic achievement.

This increased motivation leads to the final portion of multicultural education efficiency being empowerment and encouragement. As a new member of a majority populated environment, minorities are left with four choices in order to overcome this situation. John W. Berry analyzes the issue of acculturation in four parts being integration, assimilation, segregation or separation. "Integration, according to Berry, is the situation where one not only keeps one's own identity but also has close contact with the new culture. In assimilation one gives up one's own identity and adopts the new culture as one's own. If the immigrant group is not welcomed by the majority culture, Berry talks about segregation. In separation, the minority group decides to keep away from the majority culture. Marginalization is the situation where one is no longer part of one's own"18. In the case of South Korea, separation it most often observed especially in areas such as Itaewon. Here, any visitor can witness the significant and blatant presence of another language and culture. A strong presence of immigrants of African and Middle Eastern decent is shown through the establishment of various businesses such as restaurants, grocery stores, and travel agencies. In addition to these commercial outlets,

¹⁴Tvack (1991)

¹⁵Student teachers before they have undertaken any teaching

¹⁶Sunnie Lee Watson, Pre-Service Teachers

¹⁷M.V. Helsinki

¹⁸M.V. Helsinki

between natives and foreigners. Buildings with large insect infestation, improper security, and low maintenance have stark implication of native Korean expectations and care of multicultural groups. Presenting an image of limited differences and equal settings promotes empowerment to minority groups feeling encouraged to excel and achieve success in other areas of life. Most often in homogeneous societies, those of multicultural backgrounds are regarded with repugnance. Real interaction perhaps at local grocers, banks, and social events are not enough to curb this perception. "Minority cultures [are] easily seen as ethnographic pieces from a museum, instead of being seen as people who were changing and transforming ways of performing everyday tasks" thereby diminishing minority empowerment. Teaching and instituting acceptance and tolerance at the national level from a community initiative allows for more efficient programs and ongoing success.

Korean Multicultural Education policy suggestion (2) Suggestions for Targets and Approach

Current multicultural education policies have received criticisms for ambiguously mixing up assimilationist and multicultural programs and for narrowly targeting the immigrant population .(박민정 120) This imbalance in policy direction, especially leading to the lack of educational contents targeting the main society, could be problematic, because without a heightened multicultural awareness of the main society, it would be difficult to build a multicultural-friendly environment. With this problem at hand, it is important to give attention to the perception of the dominant society specifically by helping students form a 'critical thinking' of the current situation.

There are three main directions for multicultural education policy; assimilationist approach, cultural diversity approach, and critical thinking approach. The assimilationist approach aims at maintaining the status quo in society since the diversity introduced with the influx of immigrants is seen as harming stable social integration. The cultural diversity approach aims at enhancing a clear, positive understanding of diverse cultures while respecting the particularity of each culture and their interaction. This approach is expected to contribute to solving the conflicts in society. Yet, this approach has its limits in hiding the actual inequality or power structure among different cultures in one society by seeking the ideal state of coexistence without a proper critical analysis of the current state.

The 'critical thinking approach' aims to reveal the hidden discriminative and unequal mechanism, with the ultimate goal of realizing social justice, liberty and equality²⁰. So the contents of education surpass the simple understanding of cultural diversity; they include forming a critical viewpoint of the students themselves to rightly analyze and criticize the system within.(박민정 122-4) Especially, in Korean society, and within the educational contents, the notion of 'mono-ethnicity' is salient. With this dominant perception, minorities, for example immigrants, frequently receive maltreatments and discrimination. Therefore, in order to enhance the 'multicultural acceptance' in society, critical reflection would first be needed, especially in regards to the injustice the minority experience based on cultural bias.

In this context, we suggest that multicultural education should also target Korean students, rather than just the multicultural students, especially using the 'critical approach'. Until now, multicultural education has been equalized as the acculturation for the immigrant population and their children. (박민정 125) In Itaewon Elementary School, for example, we have seen that Korean students rarely participate in multicultural classes. Even when they do, there is no opportunity in an analytical context to examine the multicultural perception in society and learn about how to embrace or appreciate increased diversity. Rather, these scarce occasions are for simply introducing other cultures or languages. This limited approach does not seem to effectively lead students to acquire a just perspective in

²⁰This critical approach is in line with the foremost goal of multiculturalism policies defined by the 'Migration Policy Institute'; Therefore, multiculturalism is first and foremost about developing new models of democratic citizenship, grounded in human-rights ideals, to replace earlier uncivil and undemocratic relations of hierarchy and exclusion. (Kymlicka)

perceiving the minority immigrant population without following the bias adopted from the conservative majority.

In terms of approach, we should go further than just teaching about what different kinds of cultures there are; rather, we should teach students to autonomously develop a critical analysis about discriminative society by providing materials about multicultural awareness, social justice, and equality, in terms of the majority and minority. For this purpose, we would specifically need to change the educational contents which strengthen the belief in mono-ethnicity.

In Relation to Social Security and Sustainability

Roe's Social Security Dilemma could be summarized as follows; if the collective identity of certain group becomes greater, other groups reinforce their identities in reaction and this competition might bring about conflicts. (김병조 18) So, when the society becomes to comprise diverse cultures, the main society might feel threatened and insecure in their identity and might try to reinforce it, even through conflictual methods.

There is an analysis from the Copenhagen school that the conflict or opposition might come from the misperception or lack of knowledge about the identity of minority groups and also from the ethnocentrism.(김병 Ξ 18-9) Korean society where we have a strong belief in mono-ethnicity and ethnocentrism seems to be more prone to this kind of conflict and it is probable that we witness more counter reactions from the main society against the immigrants' cultures.

Based on the above theory, it could be assumed that if we could reduce people's misperception or bias towards the identity of minority immigrant groups by offering educational opportunities, the conflicts coming from the social security dilemma might partly be hindered. In this context, in multicultural education, it would be important to target Korean students and help them develop a sound understanding of different concepts such as diversity, identity and of diverse cultural groups.

Especially, with the critical thinking approach, students would be able to analyze the misperceptions in the society and develop unbiased ideas on the minority immigrant population. With this teaching method for native Korean students, we might be able to execute a balanced multicultural education consequently lessen social conflicts and enhance multicultural awareness, making the society more sustainable.

Conclusion

The population in Korea has experienced drastic changes. Due to the influx of immigrants and migrant workers, a multicultural society has been created with stark opposition. In order to promote change and acceptance, a proper and accurate articulation of the issue is paramount. Multicultural education is not efficient or effective when based solely on teaching multicultural students Korean language and culture. In order to provide a stable, efficient, and progressive program, all factors of the issue need to be considered and well thought out. The current efforts used in multicultural education in Seoul, South Korea are merely a transitory tactic used to foster false promotion of a deeply concerning issue. The effect of poor education on multicultural students, families, and native Koreans can be detrimental to the economic welfare of this country. Proper action taken at this stage will be beneficial to all involved due to one inevitable conclusion: immigration is everlasting. Learning from the efforts of the past three years at Miwon Primary School serves as a caveat to understanding that knowledge is power.

Acknowledging the success of this school leads researchers to believe that the current initiative taken by government and its affiliates are merely performed as trendy social awareness jargon. Advertising to travelers, tourists, visa holders, and working class citizens of multicultural educational practices is purely used for the acknowledgement of the issue to satisfy the bureaucracy. According to the Seoul Global Tourism Center, an affiliate of the Seoul Metropolitan Government, certain programs are offered to raise awareness of the multicultural issue. This website markets cultural exchanges to promote mutual understanding of both foreign and Korean culture. For example, these programs allow foreigners to experi-

ence traditional Korean culture and joint programs with foreign cultural institutes in South Korea. In addition to offering Korean language courses, foreign language classes are offered as well. Furthermore, this organization advertises programs to boost cultural diversity in Seoul such as events for multicultural families and educational programs to eliminate cultural prejudice²¹. To a common observer, these programs appear to be socially conscious, aware, and allude to the idea of expert knowledge in the area. On the contrary, when inquiring about these multicultural education programs, it was shocking to discover that they do not exist. Cultural exchange programs were explained as the center providing a space for people to find friendships with others who also speak their language and to continue the exchange elsewhere. There are absolutely no programs offered for multicultural families and educational programs to eliminate cultural prejudice.

In order for progression, proper knowledge and commitment need to be conducted. A great concept with no follow through is only further hindering this country's chances at to becoming a global leader in addition to being respected and recognized in the international marketplace. Proper multicultural education practices are necessary to take South Korea to the next step in the global economy. We infer that these policies will be most effective at the public elementary school level.

²¹HiSeoul Website

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Research Papers

Young North Korean defectors and their Adaptation Challenges in South Korea.

Authors: Alicia Jang, Katerin Figueroa, Cho young Mook and Kyungjin Urizia Jung.

1. Introduction

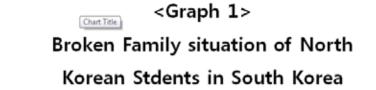
After the Korean War in 1953, relations between South and North Korea had become completely divided and in the early 1990s, many North Koreans were suffering from starvation and looking to escape to the South. However, as the number of North Korean defectors increased, a number of problems emerged. Most of the defectors were used to a socialist society so it was difficult for them to adapt to South Korea's capitalism. Consequently, many fell behind in South Korea's competitive society and struggled to adapt to their new environment. Various civil organizations were established to help resolve these problems and support North Korean defectors, but unfortunately lacked funding and human resources and continue to do so.

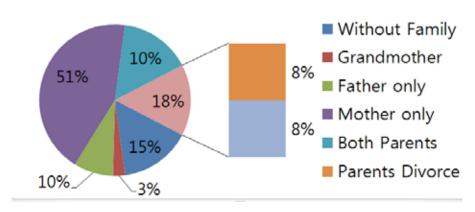
This research paper focuses on young North Korean Defectors and analyzes the various problems and prejudices they face. It is said that the memories formed in adolescence affect one's personality and view of society later on in life. Therefore, there is no single simple solution to easing teenagers' transition from North to South Korea. The purpose of this research is to discuss the current challenges young North Korean defectors face, with particular focus on the education system in South Korea, and the solutions which could ease their adaptation.

<u>2. The present condition of education for North Korean teenage defectors</u> <u>2.1 The education system and support programs for North Korean teenager defectors</u>

The number of families and young people entering South Korea from

North Korea is increasing. 83% of youth defectors are from broken families and 18% are alone in South Korea without any parents or grandparents (Graph 1). They are categorized as children heads of household.²





Source: Measures or supplement of legal system for aid in young North Korean defectors. Ministry of Unification and Korean Youth Union's joint research. 2008

The process of crossing territories often leaves those involved mentally affected. A teacher from Yeomyung School, one of the few alternative institutions which helps young North Korean refugees adapt, points out

¹ Cho, Young-A. Influence from experience factors to adaptation in school of North Korean teenagers. Seoul Cyber University, 2007. Pp 1-4

²Yi-Jong Kwon. Measures or supplement of legal system for aid in young North Korean defectors. Ministry of Unification and Korean Youth Union's joint research. 2008. Pp 16-42

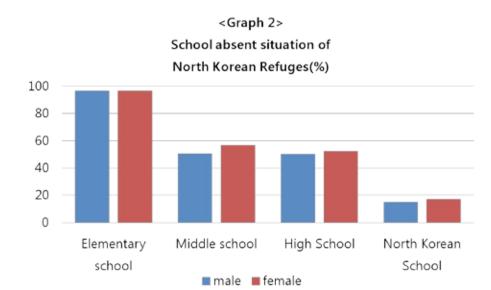
that "students are having difficulties in adaptation which includes daily performance such as using public transportation, registration with bank and dealing with public administration. (...) Most students are from broken home with absence of parents and often feel loneliness and do not feel they are emotionally stable. (...) they need appropriate education and assistance".³

Today, most North Korean defectors receive an education at a 'Hanawon', a school specialized to teach the basics of settling into South Korea. The program (usually given over the period of three months) is designed to promote emotional stability, physical health, an understanding of different societies whilst also offering basic vocational training. The overarching purpose of the program is to help resolve any mental conditions suffered by the defector, reduce cultural shock, and assist with assimilation into a capitalist society.⁴

2.2. Education conditions and problems

Sadly however, this education system does not always help defectors in the most effective manner. Of all registered young North Korean refugees, about 90% are enrolled at a primary school but only 50% are enrolled at a middle or high school (Graph 2).⁵ Financial scholarships only tend to be awarded to those who go on to university and are properly settled in South Korea. This disadvantages those whom attend alternative institutes such as Hanawon, as they are taught practical rather than academic skills. Furthermore, many alternative institutes suffer from a shortage of teachers, funding from the government and are concentrated in Seoul so are difficult to access from rural areas.

As we have previously mentioned, the period of Hanawon education is



Source: North Korean Refuges Teenager research paper 2012, North Korean Refuges Foundation

also very short. What's more, most students also need a school very nearby as they will not have the IT skills or internet access to learn remotely, and will not be in a position to move residence or commute long distances...⁶

Our research has shown that a separate education system should be established to explicitly recognize and help North Korean defectors. In today's society, young North Korean defectors are often grouped under the heading 'multicultural families' and only receive limited support. However, many defectors feel offended when they are treated like foreigners. One interviewee said "we (North and South Korea) are only separated just over half century. I admit that there are many changes in two societies, but there are no doubt that we are still Korean; we speak Korean and share many of Korean heritage, and suddenly just after 50 years we are "foreigner? I would rather immigrate to other countries such as United States and Britain and treat as a "foreigner" when I am actually a foreigner." North Korean defectors therefore often feel placed in a strange position between "defector" and "foreigner", pigeonholed a "minority of minority" and lacking the support they both deserve and require.

³Kang, Soo-san. Personal Inteview. 23 August 2013.

⁴ Sun-Hwa Kim. Aid system and institutes for North Korean defectors. Moojigae youth centre multicultural expert education and training book at elementary level. 2007. Pp 48

 $^{^5}$ Yi-Jong Kwon. Measures or supplement of legal system for aid in young North Korean defectors. Ministry of Unification and Korean Youth Union's joint research. 2008. Pp 16-42

 $^{^6}$ Kim, In-sung from Database Center For North Korean Human Rights. Personal Interview. 2013.08.07

⁷ Kim, In-sun (pseudonym), Lee, Sun young. (pseudonym). Personal Interview. 2013.08.22

Many North Korean students have expressed their frustration over the government's lack of support. For example, there are no classes to help them learn the foreign words and phrases now widely used in contemporary South Korean culture. This makes adjusting to a new environment even more difficult and may even partly explain the low rate of entrance to institutions of advanced education .

It is also noticeable that there is not enough psychotherapy for young North Korean defectors. In addition to the emotional trauma they will have most likley sustained, they need extra therapy to help them adapt to their new environment and cope without their guardians. Dr. Cho Han-Bum from Korea Institute for National Unification notes that "even South students are not able to get therapies so it is almost impossible for North students". Teachers from alternative institutions often come to serve the role of guardians, but despite their best efforts to help students, whilst they suffer the resource constraints previously outlined, the assistance they can provide will never be adequate.

3. Analyzing the reasons for the problems

3.1 The prejudice felt towards North Korean teenage defectors

Young defectors face prejudice as they come from a different ideological background. Only Koreans understand the specific conditions faced on the peninsula so many foreign NGOs do not really know how to help⁹. The lack of education in South Korea about North Korean issues only intensifies discrimination against defectors. For example, there are cases of parents demanding their child be moved to a different class when they learn they share lessons with a defector.¹⁰ With little support from the schooling system, such young adults feel they have no-one to turn to. Ignoring these factors and just focusing on financial compensation does

⁸ Dr. Cho, Han-bum, from Korea Institute for National Unification(KINU). Personal Interview. 2013.08.06. not successfully address their needs.

Due to the risk of being discriminated against, young defectors prefer to hide their personal history. Students enrolled in regular schools tend to introduce themselves as oversea Koreans instead of defectors so their integration is that much easier. The North Korean support centre is available to lend support in such matters but not many people reach out for help because they do not want to reveal their backgrounds.¹¹

The lack of initiatives from the government in matters of education is obvious. The government clearly needs to take more steps to introduce initiatives into the education system which will assist the adaptation of young defectors. However, this is not an easy issue to deal with as each person will have different experiences and their own unique problems. Nevertheless, improvements to the education system seem the best means of helping North Korean defectors adapt to the country.

Conclusions and Recommendations

Once out of North Korea, there is no guarantee of having an easy life. On arrival in the South, there are many challenges to be traversed before successfully adapting to a new and very different country. To speak the same language and culture on a number of different levels is difficult and takes time. Young North Korean defectors face major challenges as they have to adapt to one of the most demanding education systems in the world. Many suffered hunger, and poor nutrition, the loss of their parents, and have enduring psychological problems. Yet they also have to cope with constant abuse from their peers and discrimination from wider society.

Various problems were caused by the increase in number of North Korean defectors, but the most important and one of the most difficult issues to treat is the racism to which they are subjected. One cannot generalize but our research found that the majority of South Koreans are reluctant or indifferent to North Korean defectors living in the South. The discrimination they are consequently subjected to has prompted a rise in remigration. Many North Koreans find it so difficult to adapt to life in the South they choose to start again in countries like England, America or Germany.

⁹ Kim, Yoon-Min (pseudonym). Personal Interview. 22 Aug. 2013

¹⁰ Dr. Cho, Hn-bum, from Korea Institute for National Unification(KINU). Personal Interview. 6 Aug. 2013.

 $^{^{\}rm 11}$ Jung-Ah Cho. Living and helping together: young defectors' adaptaion in school and plan for support. 2008. Pp 4-8

The South Korean government needs to launch educational campaigns which counter racism against defectors. It is vital that the population is sensitized to the effects of racism on the lives and adaptation chances of North Koreans defectors, especially the young who are in their most crucial stages of development and whose forced departure from school would see them sacrifice valuable opportunities.

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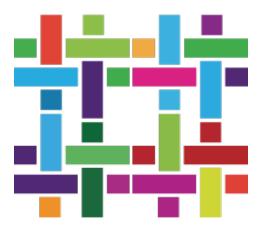




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From left to right: Kunchol Kim, Jeongyoon Hur and Daniel Kim.

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