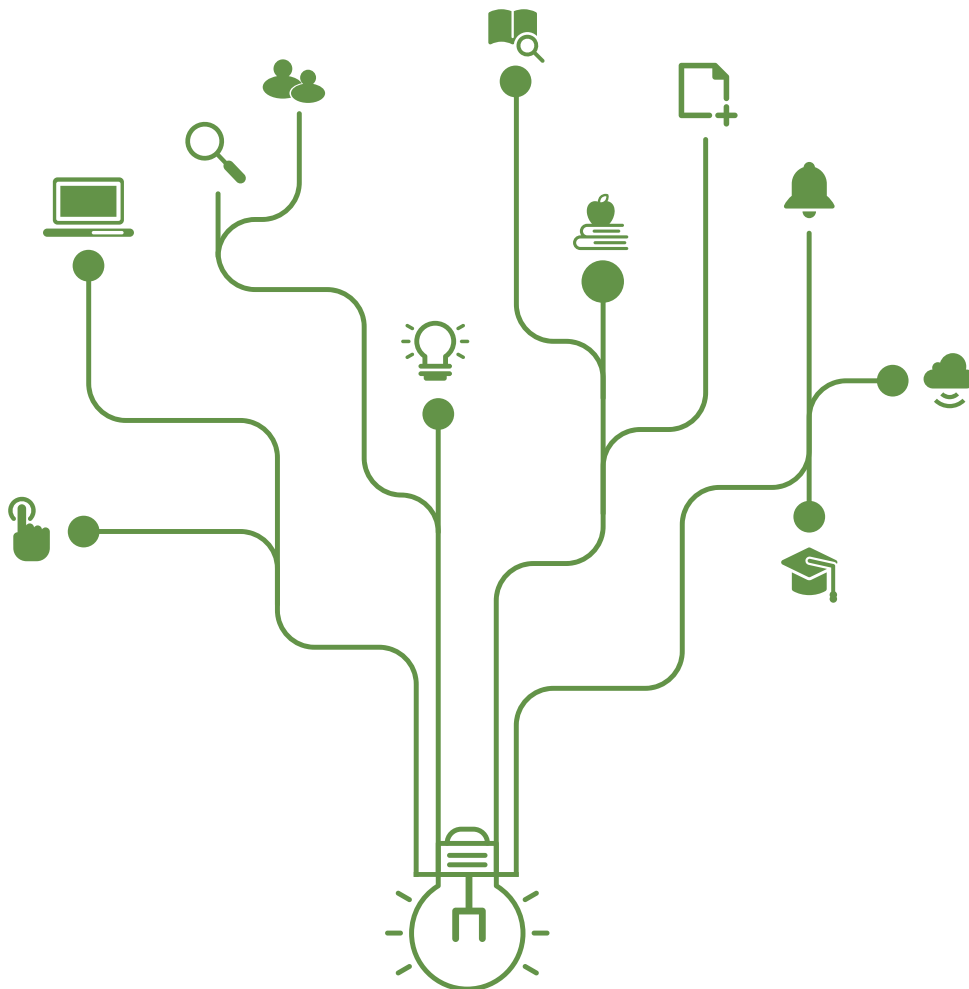


# Investigating Human Capital Development in Globalized Environment: Effects of Higher Education at KDIS

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# **Investigating Human Capital Development in Globalized Environment: Effects of Higher Education at KDIS**

## **Abstract**

**The purpose of this study:** Various studies have examined the impacts of the academic achievement and performance of international students, while most of papers focused on short-term effects. Previous studies also focused on academic performance of international students from countries such as China and Japan in U.S. and U.K. KDI school of public policy and management have performed exit survey each year that mainly analyzed the short-term impact, while long-term effects have rarely examined. The purpose of this study is to investigate long-term academic effects of international students in globalized environment. By classifying effects, this study expects to investigate effects on work, effects on globalization, and effects on hosting country.

**Research questions:** This study applied research questions as follows: i) how international graduates perceive application at work, improvement on work/organization/system, performance assessment, self-confidence, and use of network affect job satisfaction; ii) how international graduates perceive leadership skills, policy improvement, and improved public diplomacy affect perception of global leader; iii) how international graduates' perceived affection, cognition, and behavior about hosting country affect improved image of Korea; and iv) how perceived social responsibility and global competence of international graduates affect perception of globalization?

**Methodology:** This study collected both qualitative and quantitative data. For quantitative data, this study distributed online survey to all alumni of KDI School.

**Data Analysis:** For qualitative data, this study conducted in-depth and focus group interview. For quantitative research, this study applied factor, regression analysis, and structural equational modeling. For qualitative research, this study applied NVivo and Leximancer.

**Results:** For mediated effects, the study found that effects of improvement on work, performance assessment, self-confidence, and use of network showed significant on job satisfaction. The effect size was greater with self-confidence on job satisfaction. For long-term effects, the study found that effects of leadership skills, policy improvement, and public diplomacy showed significant on global leader. The study also found that effects of social responsibility and global competence showed significant on globalization. Results of this study also found that affective, cognitive, and behavioral components significantly affect attitude toward the Korea. Major variables found from quantitative research showed consistency with qualitative research.

**Implications:** The results of this study confirmed the role of KDIS's academic empowerment in global environment. The results also implied how human capital development in global environment plays key role to enhance image of hosting country.

**Keywords:** Human Capital Development, Higher Education, KDIS, Job Satisfaction, Leadership, Globalization

## **I. Introduction**

Human capital plays a critical role in various fields such as economic growth and poverty reduction (Son, 2010). According to Tremblay, Lalancette, and Roseveare (2012), skills and human capital have become the backbone of economic prosperity and social well-being in the 21<sup>st</sup> century. Human capital development has been explored in the context of higher education. Dill and Van Vught (2010) addressed that higher education represents a critical factor in innovation and human capital development and plays a central role in the success and sustainability of the knowledge economy (Tremblay, Lalancette, & Roseveare, 2012). Higher education is referred to as “Student-as-Partners (SaP) approach (Fortune, Borkovic, Bhopti, Somoza, Nhan, & Rangwala, 2019; Green, 2019) that described as a collaborative, reciprocal process through which all participants have the opportunity to contribute equally to curricular or pedagogical conceptualization, decision-making, implementation, investigation, or analysis” (Cook-Sather, Bovill, & Felten, 2014).

Human capital development in higher education has been paid attention by scholars. Previous studies on human capital development in higher education addressed changing landscape of higher education internationalization (Knight, 2013). Previous studies in higher education in global environment addressed effects of global citizenship that addressed distinct understanding of the role for the global citizen (Shultz, 2007). Studies examined effects of international higher education on conceptualization of global citizen (Lilley, Barker, & Harris, 2017), student engagement in international education (Green, 2019), and global citizen concept (Jooste & Heleta, 2017), which respect diversity (Oxfam, 2008). Lilley, Barker, and Harris (2017) also stated international higher education experts conceptualizes the global citizen or ideal global graduate that underpinning values and mind-set they present.

The purpose of this study is to explore effects of international students in higher education in global environment. Previous studies have examined immediate effects by measuring effects upon graduation, while studies rarely examined mediate and long-term effects after graduation. This study investigated mediate effects including effects of global learning experience on work such as job satisfaction, understanding policy and global issues, and effects on hosting country after graduation. According to AAC&U (2015), objective of global learning became informed, open-minded, and responsible people who are attentive to diversity across the spectrum of differences. This study measured effects based on international alumni at KDI School of Public Policy and Management (KDIS) that is education hub (Knight, 2011) by generating international alumni across 136 countries via higher education. This study applied research questions as follows: i) how international graduates perceive application at work, improvement on work/organization/system, performance assessment, self-confidence, and use of network affect job satisfaction; ii) how international graduates perceive leadership skills, policy improvement, and improved public diplomacy affect perception of global leader; iii) how international graduates' perceived affection, cognition, and behavior about hosting country affect improved image of Korea; and iv) how perceived social responsibility and global competence of international graduates affect perception of globalization?

## **II. Literature Review**

### **2.1 Human Capital Development in Higher Education**

International collaboration in the field of higher education is becoming a beneficial way of developing countries to acquire human capital from more developed countries (Lönnqvist, Laihonon, Cai, & Hasanen, 2018). According to Kim (1998), human capital accumulation in a society covers two distinct and indispensable processes including the creation of knowledge

and the embodiment of knowledge in a person. Kim (1998) also stated that for developing countries, importing advanced knowledge which was created by developed countries opens a new horizon for human capital accumulation. According to Perna, et al. (2014), international scholarship programs in higher education have established to train the administrative elite of some nations' colonies in the early 20<sup>th</sup> century. Highly developed democratic countries applied international scholarship programs to counteract the ideological influence of the Communist with fund by intergovernmental agencies and private sponsors (Varghese, 2008; Perna, et al., 2014).

According to Kim (2014), over the last two decades, global debate on ODA in education has paid attention by increasing the volume of aid. Korea allocated significant aid towards education sector, in particularly, 25% of total shares for higher education (Kim, 2013). ODA policies in Korea have focused on utilization of human resources in global environment with the many years of professional experience of KOICA (Min, 2018).

## **2.2 Human Capital Development in Higher Education at KDIS**

KDI School of Public Policy and Management (KDIS) have started degree program for higher education inviting international students in 1999 with the cooperation of Korea International Cooperation Agency (KOICA). The earlier purposes of higher education at KDIS is to react global environment by educating human capital with expert knowledge on international subjects and problem solving capabilities. From 2010, international scholarship programs in higher education at KDIS have conducted as a form of ODA Scholarship program.

Global scholarship programs have provided opportunities for higher education. International scholarship programs in higher education have existed for many years (Perna, et al., 2014). Colombo Plan has been established by Austrailia and supported scholarship titled "Australia Awards" to more than 80,000 over 60 years (<http://australiaawards.gov.au>). The

New Colombo Plan involves a scholarship program for study of up to one year and internships or mentorships, and a flexible mobility grants program for both short and longer-term study, internships, mentorships, practicums and research (<https://dfat.gov.au>). The Commonwealth Scholarship and Fellowship Plan (CSFP), U.K.'s scholarship plan set the goal for cooperative education experiences and aim the best knowledge outcome (Mawer, Quraishi, & Day, 2016). USAID Participant Training (PT), U.S.'s scholarship program designed for capacity development outcome measurements and accountability (<https://www.usaid.gov>). KDIS has received opportunities for scholarship programs for international students from Colombo Plan, Global Ambassador Scholarship and Fellowship, KOICA Scholarship, KOGAS Global Fellowship, Seoul G20 Global Leader's Fellowship, Partners in Globalization Fellowship, POSCO Fellowship, The Hyundai Motor Chung Mong-Koo Foundation Scholarship, PT Bank Hana Indonesia Scholarship, MIPD Scholarship Partners in Globalization Fellowship, IBK Scholarship, IDB Scholarship, GLiMPSE Scholarship, FSS-KFB Scholarship, etc.

### **2.3 Assessment of Human Capital Development**

Previous studies have proposed various models to evaluate effects of human resource development and training. Models classified education effects based on stages. Well-known models include the following: i) Context, Input, Process, and Product (CIPP Evaluation Model developed by Daniel Stufflebeam and Colleagues, Robinson, 2002), ii) Context, Input, Reaction, and Outcome (CIRO Model by Warr, Bird, and Rackham, 1970), iii) Reaction, Learning, Behavior, and Result (Kirkpatrick Model, Kirkpatrick, 1994, 1996), and iv) Reaction, Learning, Behavior, Result, and Return of Investment (ROI, Phillips Model, Phillips, 2003). Characteristics of models include how to measure the effects, after only or before and after the education. Models that measured after the education addressed short and mid-term effects such as immediate and intermediate effect from CIPO model, job application and business impact



from Phillips Model, and behavior and results from Kirkpatrick Model, while models also proposed long-term effects such as ultimate effect from CIPO model (Warr, Bird, and Rackham, 1970) and ROI from Phillips Model. For the assessment of ODA progress, previous studies have applied criteria including appropriateness, effectiveness, efficiency, impactful, and sustainability (KIEP, 2016).

### **III. Theoretical Background**

Various studies defined human capital theory with different perspectives. Becker (1993) stated that human capital theory assumes that an individual decides to enroll in higher education in general or foreign education by considering economic benefits. According to Eide and Showalter (2010), human capital theory addressed that individuals invest in education in anticipation of a wide range of benefits, most empirical work has focused on the monetary rewards of increased earnings. Carneiro, Dearden, and Vignoles (2010) stated that human capital theory as the dominant paradigm in the economics of education suggests that education and training are investments that make individual genuinely more productive. Human capital theory states that an individual will undertake training when the present discounted value of the benefits of training exceeds the cost of training (McCall, Smith, & Wunsch, 2015). Wiers-Jenssen (2008) addressed that human capital theory predicts a positive relationship between schooling and the degree of labor market success. Allport's (1954) contact theory addressed the means through which students might gain global, international, and intercultural competencies by interacting with international students on campus or by interacting with others while studying abroad (Soria & Troisi, 2014) also supports this study.

Human capital development in international higher education is also supported by the concept of neoliberalism. Lilley, Barker, and Harris (2017) addressed that the global citizen in higher education can be conceptualized through a neoliberal and transformative cosmopolitan

lens by addressing capabilities of a broader mind-set (p.7). Shultz (2007) also highlighted a neoliberal approach as one of approaches for global education policies and global citizenship education. Previous studies also adopted signalling theory on education (Arrow, 1973; Spence, 1973) by addressing positive aspects on education from abroad with signal extracurricular skills such as language skills and knowledge of a foreign country and certain personal properties such as initiative or flexibility (Wiers-Jenssen, 2008).

#### **IV. Hypotheses Development**

Lönnqvist, Laihonen, Cai, and Hasanen (2018) addressed effects of education export from the intellectual capital to a provider country, organization (e.g., a university or a company), and a customer (e.g., an institution or an individual) by examining the customers perspective and the provider's perspective.

##### **4.1 Effects of Higher Education on Job Satisfaction**

Job satisfaction is defined as “a pleasure or positive emotional state resulting from the appraisal of one’s job or job experiences” (Locke, 1976). Previous studies also examined the impact of education on job satisfaction. Mora, Garcia-Aracil, and Vila (2007) studied the effects of diverse education-related variables on job satisfaction scores using higher education graduates, while a study by Ueno and Krause (2018) addressed overeducated workers tend to be less satisfied in some environment. Badillo-Amador and Vila (2013) stated that the abilities, capacities, attitudes, and knowledge possessed by workers determine their levels of professional skill, which in turn in their current jobs, while skill mismatches appeared as key determinants of workers’ job satisfaction. Previous studies addressed that higher education affects employability skills such as interpersonal skills, communication skill, teamwork skills, career-related skills, and analytical skills and improve career-related benefits such as prospects and motivation (Potts, 2015). Potts (2015) also stated that international experiences contributed

career capital, particularly with regard to the acquisition of soft skills such as cultural intelligence and intercultural communication. Levine, Christian, and Lyons (2013) posts that global managers' higher education from NASPAA-accredited programs affects change in public organizations and leaderships skills successfully that are also learned in course curricula. This study hypothesized factors that might affect job satisfaction including application and improvement on work, performance, self-confidence, and use of network.

**H1:** Perceived applications on work affects job satisfaction.

**H2:** Perceived improvement on work affects job satisfaction.

**H3:** Perceived performance affects job satisfaction.

**H4:** Perceived self-confidence affects job satisfaction.

**H5:** Perceived use of network affects job satisfaction

#### **4.2 Effects of Higher Education on Global Leader and Globalization**

Wiers-Jenssen (2008) posited that internationalization and globalization are important characteristics of current development of society, and production of knowledge and higher education are no exception (p.101). Internationalization and globalization are often applied interchangeably, while globalization is more commonly applied in recent studies. Aktas, Pitts, Richards, and Silova (2017) stated that internationalization has become a growing trend in higher education worldwide and campus-wide internationalization includes "global-citizenship" programs that enhance students' academic, professional, and personal development to help them better navigate a more globalized world. Soria and Troisi (2014) addressed global/international coursework, interactions with international students and participation in global/international co-curricular activities help yield development of global, international, and intercultural competencies. Lönnqvist, Laihonen, and Cai (2018) found two separate effects on the internationalization of higher education including education export and intellectual capital.

Chen and Statosta (2000) highlighted central component of global citizenship by

addressing intercultural sensitivity with effective interaction, dialogues, and participation in the multicultural societies. Shultz (2007) addressed that educating for global citizenship is a complex and contested concept and that educators who claim to be educating for global citizenship must be clear on the implications of their work. According to definition by Oxfam (2008), education for global citizenship is transformative, developing knowledge and understanding, skills, values and attitudes that learners need to participate fully in a globalized society and economy in a fast-changing and interdependent world. Caruana (2014) stated that developing graduates as global citizens is a central aim of the internationalized university with the premised notations of cosmopolitanism for international mobility. Committee for Economic Development (2006) addressed the importance of improving education in foreign languages and international studies for people should be informed to public by national leaders, political leaders, education, etc. After studying higher education in global environment that focused in the subjects of public policy, development policy, and public management, this study posits that leadership skills including encourage employees and commitment, policy improvement skills including government trust, policy issues, and coordination, and public diplomacy skills including enhancing partnership, foreign policy, and build diplomacy will be improved and affect to global leadership. Therefore, this study hypothesized effects of perceived leadership skills, perceived policy analysis improvement, and perceived public diplomacy on global leader.

**H6:** Perceived leadership skills affects perception on global leadership.

**H7:** Perceived policy analysis improvement affects perception on global leadership.

**H8:** Perceived public diplomacy affects perception on global leadership.

A study by Sprague and Percy (2014) analyzed the immediate and long-term impact of practicum experiences on students and found the improvement on policy analysis skills and

general professional skills proven useful in most jobs. This study also posits that social responsibility concepts including interconnectedness, understanding global environment, and gender equality and global competence concepts including knowledge in global, cross-cultural, and work in international environment will be improved and affect globalized mindset. Therefore, this study also hypothesized effects of perceived social responsibility and global competence on globalization.

**H9:** Perceived social responsibility affects perception on globalization.

**H10:** Perceived global competence affects perception on globalization.

### **4.3 Effects of Higher Education on Hosting Country**

Previous studies (Alharbi and Smith, 2018; Ha, Lee, & Shin, 2015) addressed effects of international education on cultural benefits to the hosting country. Ro, Lee, and Yoo (2003) indicated also that international students' understanding of culture of host country has a positive impact on securing support for the hosting country. Nye (2004) stated that the educational exchange is likely to have soft power that makes others desire the same outcomes by co-opting rather than coercing them. Ro, Lee, and Yoo (2003) also stated that domestic students are likely to become interested in the language, culture, arts, society, and economy of other countries through interaction with international students, and thus will have the opportunity to develop a more global mindset.

This study addressed that impact of international in higher education on hosting country including changes of affection, cognition, and behavior after studied. Caruana (2014) addressed cultural mediator in higher education and stated that intercultural understanding is a prerequisite of global citizenship. Aktas, Pitts, Richards, and Silova (2017) addressed importance of developing global competences in higher education in a variety of cultural contexts. This study posits that cultural experiences, improvement of knowledge on hosting country,

emotional feelings via experiences, and involvement of local communities include outcomes of effects of international in higher education on hosting country. This study hypothesized effects of perceived affection, cognition, and behavior on image of hosting country, Korea.

**H11:** Perceived affection affects improved image of Korea.

**H12:** Perceived cognition affects improved image of Korea.

**H13:** Behavior affects improved image of Korea.

## **V. Methodology**

### **5.1 Quantitative Research**

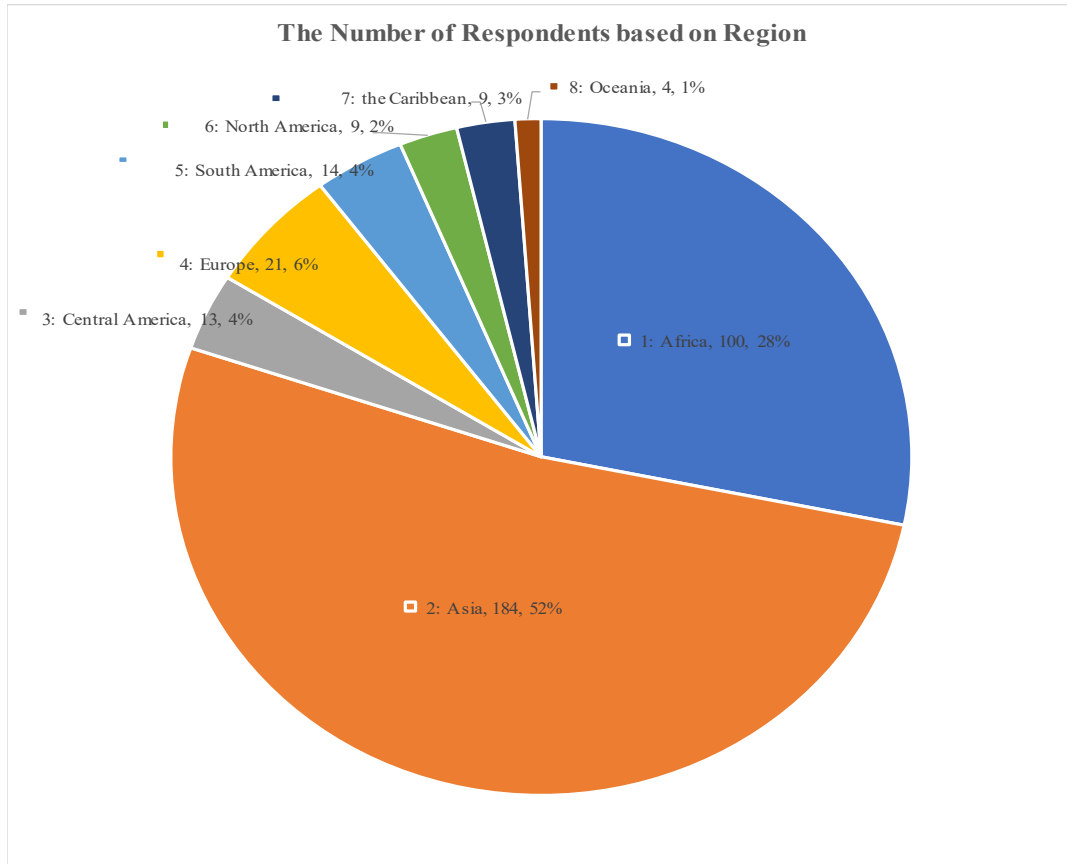
This study collected data via online. This study distributed data to all international graduates holding Masters and Ph.D. from KDIS. Country of origin of all international graduates includes total of 136 countries. According to Caruana (2014), student diversity provides a rich source of lived experience that can be harnessed as a resource in developing graduates as global citizens. This study conducted pretest with 23 international graduates from diverse countries. Both quantitative and qualitative data were collected from pre-test. For quantitative research, this study distributed survey, while for qualitative research, this study conducted in-depth and focus group interviews. After the pretest was conducted, wordings and structures of questionnaire items for survey and questions for interviews were modified. Modified version were applied for main study. Out of 2,704, a total 354 of KDI alumni answered the survey. Therefore, response rate was 0.131. Table 1 summarized demographics of respondents.

**Table 1. Demographics of Respondents**

<b>Characteristics</b>		<b>Number</b>	<b>%</b>
<b>Gender</b>	Male	196	55.37
	Female	150	42.37
	Not Responded	8	2.26
<b>Marriage</b>	Married	191	53.95
	Not married	155	43.79
	Not Responded	8	2.26
<b>Age</b>	Under 25 years old	4	1.13
	25 years old ~ 29 years old	61	17.23
	30 years old ~ 34 years old	109	30.79
	35 years old ~ 39 years old	81	22.88
	40 years old ~ 44 years old	57	16.10
	45 years old ~ 49 years old	21	5.93
	50 years old ~ 54 years old	9	2.54
	55 years old or older	4	1.13
Not Responded	8	2.26	
<b>Education</b>	Master's degree or enrolled	326	92.09
	Ph.D. or enrolled	20	5.65
	Not Responded	8	2.26
<b>Type of Degree</b>	Master in Public Policy	167	47.18
	Master in Development Policy	122	34.46
	Master in Public Management	48	13.56
	MBA	7	1.98
	MFDI	0	0
	MAM	0	0
	Master in Ed	1	0.28
	Ph.D. in Public Policy	3	0.85
	Ph.D. in Development Policy	1	0.28
	Other	5	1.41
<b>Region</b>	Africa	100	28.25
	Asia	184	51.98
	Central America	13	3.67
	Europe	21	5.93
	South America	14	3.95
	North America	9	2.54
	The Caribbean	9	2.54
	Oceania	4	1.13
<b>Total</b>			<b>100</b>

The following figure (Figure 1) showed the number of respondents by region.

**Figure 1. The Number of Respondents by Region**



This study asked reasons that applied to KDIS. 29.94% stated scholarship reason, 25.99% stated attractiveness of program, 14.12% mentioned school reputation, 8.47% answered course offerings, and 2.54% answered professors. This study examined promotional opportunities after graduation. And the results show that 59.5% was promoted and 18.36% was expected to be promoted. The results also showed that 65.73% had new job opportunities after graduation. Among those, 32.98% received once, 36.11% received twice, 20.21% received three times, 2.13% received four times, and 9.57% received new job opportunities more than five times after graduation. This study asked characteristics of occupation and job status before the study at KDIS and current. Regarding occupation, percentages were higher with central government for both before the study and current, followed by corporation-private sector, academic sector, and nonprofit sector. Percentage of state government was reduced from 7.63% to 4.24%, while



corporation-public sector was increased from 3.95% to 7.06% after graduation. Percentage of junior-level officer was 48.87% before the study, while percentage of current junior-level officer was reduced to 10.73%. Percentage of mid-career officer was 39.55% before the study, while percentage of current mid-career officer was reduced to 55.93%. Percentage of high-level officer was 5.08% before the study, while percentage of current junior-level officer was reduced to 25.14%. Table 2 summarized results of characteristics of occupation and job status before the study at KDIS and current status.

**Table 2. Summary of Occupation and Job Status and Change**

<b>Characteristics</b>		<b>Number</b>	<b>%</b>
<b>Occupation - Past</b>	Central Government	165	46.61
	State Government	27	7.63
	Local Government	11	3.11
	Corporation-Public Sector	14	3.95
	Corporation-Private Sector	41	11.58
	Non-profit Sector (e.g., NGO-IGO)	30	8.47
	Academic Sector	34	9.60
	Other	32	9.04
<b>Occupation - Current</b>	Central Government	140	39.55
	State Government	15	4.24
	Local Government	8	2.26
	Corporation-Public Sector	25	7.06
	Corporation-Private Sector	46	12.99
	Non- profit Sector (e.g., NGO-IGO)	34	9.60
	Academic Sector	41	11.58
	Other	45	12.71
<b>Job Status - Past</b>	Junior-level officer	173	48.87
	Mid-career officer	140	39.55
	High-level officer	18	5.08
	Other	23	6.50
<b>Job Status - Current</b>	Junior-level officer	38	10.73
	Mid-career officer	198	55.93
	High-level officer	89	25.14
	Other	29	8.19
<b>Total</b>			<b>100</b>

Table 3 summarized means by size and based on regions.

**Table 3. Summary of Means by Size and based on Regions**

<b>Regions</b>	<b>Statements</b>	<b>Mean</b>
Africa (100 observation)	Self-Esteem	4.92
	Cross-cultural competence	4.87
	Global interconnectedness	4.86
Asia	Knowledge in global perspective	4.70

(184 observation)	Interpersonal relationship	4.86
	Self-Esteem	4.86
Central America (13 observation)	Global interconnectedness	4.77
	Knowledge in global perspective	4.77
	Self-Esteem	4.69
Europe (21 observation)	Global interconnectedness	4.47
	Cross-cultural competence	4.43
	Understand of policy issues, enhance capability at work	4.38
South America (14 observation)	Cross-cultural competence	4.93
	Knowledge in global perspective	4.74
	Self-Esteem, Global interconnectedness	4.64
North America (9 observation)	Self-Esteem, Knowledge in global perspective	4.89
	Global interconnectedness, improve expertise, build social skills	4.78
The Caribben (9 observation)	Understand of policy issues, self-esteem, improve attitude at work	4.78
	Interpersonal relationship, build social skills, commitment to public interest, build perspective on public issues, knowledge in global perspective	4.67
Oceania (4 observation)	Understand of policy issues, improvement of system, build social skills, utilize network, improve leadership, government trust, build perspective on policy issue, coordinate organization, global interconnectedness, cross-cultural competence	4.75

## 5.2 Qualitative Research

This study conducted pretest with 23 international graduates from more than 20 countries. Both quantitative and qualitative data were collected from pre-test. After the pretest was conducted, wordings and structures of questionnaire items for survey and questions for interviews were modified. Modified version were applied for main study. This study collected qualitative data via in-depth and focus group interviews and open-ended questions for both pre-test and main study. Scripted verbal data were applied for the analysis. In order to analyze qualitative data, this study applied qualitative software named Leximancer and NVivo that are known as Computer Assisted Qualitative Data Analysis (CAQDAS) tools. CAQDAS has capability to manage text data by categorizing them and providing solutions for interpretation (Merriam & Tisdell, 2016). According to Merriam & Tisdell, (2016), software packages for qualitative research functions as marking text, building codebook, indexing, categorizing, creating memos, displaying multiple text entries, importing & exporting data, displaying

graphics and matrix and still have some differences. Leximancer has advantages for automatic analysis text documents by identifying high-level concepts in the text and to deliver the key ideas and insights with interactive visualizations (Leximancer Pty Ltd., accessed in 2018). Among different version of NVivo, this study applied NVivo 12 PLUS. NVivo 12 PLUS provides functions including automate coding, analysis of social networks, and enhanced data visualization (<https://www.qsrinternational.com>).

## VI. Data Analysis

### 6.1 Quantitative Research

#### 6.1.1 Descriptive Statistics of Major Variables

Table 4 ~ 12 summarized descriptive statistics for major variables.

**Table 4. Descriptive Statistics for Application**

Statements	Mean	Std. Dev.	Min	Max
<b>(Utilize knowledge and skills)</b> My study at the KDIS helps utilize the knowledge and skills.	4.655	0.532	2	5
<b>(Improve expertise)</b> My study at the KDIS helps improve my expertise.	4.624	0.535	2	5
<b>(Understand of policy issues)</b> My study at the KDIS helps increase understanding of policy issues.	4.667	0.534	2	5
<b>(Ability to understand data)</b> My study at the KDIS helps improve ability to understand data.	4.466	0.621	2	5

**Table 5. Descriptive Statistics for Work/Organization Capacity/System**

Statements	Mean	Std. Dev.	Min	Max
<b>(Enhance capability at work)</b> My study at the KDIS helps enhance my capabilities at work.	4.633	0.584	1	5
<b>(Improvement of capacity)</b> My study at the KDIS helps improve organizational capacity.	4.475	0.678	1	5
<b>(Improvement of system)</b> My study at the KDIS helps contribute to the practical improvement of the system.	4.489	0.707	1	5

**Table 6. Descriptive Statistics for Performance Assessment**

Statements	Mean	Std. Dev.	Min	Max
<b>(Promotion opportunity)</b> My study at the KDIS helps with promotion opportunities.	4.319	0.809	1	5
<b>(Wage increases)</b> My study at the KDIS helps with wage increase	4.037	0.982	1	5
<b>(Job opportunity)</b> My study at the KDIS helps with job opportunities.	4.364	0.855	1	5
<b>(Job performance)</b> I think that my job performance has been	4.556	0.705	1	5

improved after studying at the KDIS.				
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**Table 7. Descriptive Statistics for Self-Confidence**

Statements	Obs	Mean	Std. Dev.	Min	Max
<b>(Self-esteem)</b> My study at the KDIS helps with improving self-esteem and self-confidence.	354	4.732	0.582	1	5
<b>(Compassionate to employees)</b> My study at the KDIS helps improve compassionate to employees' personal needs.	354	4.477	0.746	1	5
<b>(Improve attitudes at work)</b> Overall, I feel that I have improved attitudes at work after studying at the KDIS.	354	4.658	0.597	2	5

**Table 8. Descriptive Statistics for Statements on Use of Network**

Statements	Mean	Std. Dev.	Min	Max
<b>(Interpersonal relationship)</b> My study at the KDIS helps build interpersonal relationships	4.686	0.603	2	5
<b>(Build social skills)</b> My study at the KDIS helps build social skills.	4.641	0.619	2	5
<b>(Utilize network in the job)</b> I think that I have utilized the network which was created during the program in my current job.	4.192	0.974	1	5

**Table 9. Descriptive Statistics for Job Satisfaction/Loyalty**

Statements	Mean	Std. Dev.	Min	Max
<b>(Enhance satisfaction)</b> My study at the KDIS helps enhance job satisfaction	4.342	0.785	1	5
<b>(Recommend the school)</b> I would like to recommend KDI School to my friends and colleagues.	4.842	0.455	2	5

**Table 10. Descriptive Statistics for Leadership Skills, Policy Improvement, Public Diplomacy, & Global Leader**

Statements	Mean	Std. Dev.	Min	Max
<b>Leadership Skills</b>				
<b>(Encourage employees)</b> After studying at the KDIS, I tend to encourage employees for better performance.	4.511	0.701	1	5
<b>(Commitment to public interest)</b> My study at the KDIS helps build commitment to the public interest.	4.586	0.666	2	5
<b>(Help improve leadership)</b> My study at the KDIS helps improve leadership.	4.62	0.630	1	5
<b>Policy Improvement</b>				
<b>(Enhance government trust)</b> My study at the KDIS helps enhance government trust.	4.137	0.885	1	5
<b>(Build perspective on policy issues)</b> My study at the KDIS helps build my perspective on policy issues.	4.58	0.671	1	5
<b>(Coordinate organizations)</b> My study at KDIS helps coordinate among public, private, international organizations for developing policies.	4.44	0.731	1	5
<b>Public Diplomacy</b>				
<b>(Enhance partnership)</b> My study at the KDIS helps enhance partnership between my country and Korean government/companies.	4.174	0.937	1	5

<b>(Understanding of foreign policy)</b> My study at the KDIS helps enhance my understanding of foreign policy.	4.503	0.697	1	5
<b>(Build public diplomacy)</b> I think that my study at the KDIS helps me to build public diplomacy.	4.331	0.804	1	5

**Table 11. Descriptive Statistics for Perception & Attitude on Korea**

No.	Statements	Obs	Mean	Std. Dev.	Min	Max
<i>Affective Component</i>						
11	<b>(Friendly feelings about Korea)</b> I have more friendly feelings about Korea after studying at the KDIS.	346	4.749	0.573	1	5
	<b>(Interact with Korean culture and people)</b> My willingness to interact with Korean culture and Korean friends has increased after studying at the KDIS.	346	4.728	0.62	1	5
	<b>(Continuing interests in Korea)</b> I continue to have an interest in Korea after studying at KDIS	346	4.803	0.518	1	5
<i>Cognitive Component</i>						
12	<b>(Improved knowledges about Korea)</b> My knowledge about Korea has improved after studying at KDIS.	346	4.827	0.423	3	5
	<b>(Positive images toward Korea)</b> My national image toward Korea has enhanced positively after studying at KDIS.	346	4.734	0.598	1	5
<i>Behavioral Component</i>						
13	<b>(Involve in community related to Korea)</b> I have been involved (or am willing to be involved) in community that is related to Korea.	346	4.708	0.608	1	5
	<b>(Involve strengthening partnership with Korea)</b> I have been involved (or am willing to be involved) in community to strengthen the partnership with Korea.	346	4.691	0.628	1	5
<i>Attitude on Korea</i>						
14	<b>BEFORE</b> KDI School - Overall, what was your attitude towards Korea before you studied at the KDI School?	344	4.055	0.812	1	5
	<b>AFTER</b> KDI School - Overall, what is your attitude towards Korea after you studied at the KDI School?	345	4.803	0.44	2	5

**Table 12. Descriptive Statistics for Globalization**

Statements	Mean	Std. Dev.	Min	Max
<i>Global Leader</i>				
<b>(Opportunity to be leaders)</b> I think that I have (will have) the opportunity to become a global leader with the help of the study at the KDIS.	4.474	0.705	1	5
<b>(Thinking in global community)</b> I gain a way of thinking in a global community after studied at KDIS.	4.626	0.615	2	5
<b>(Attitude/Behavior in global community)</b> I form attitudes and behaviors in a global community after studied at KDIS	4.54	0.7	1	5
<i>Social Responsibility</i>				
<b>(Global interconnectedness)</b> I perceive the importance of global interconnectedness after studying at the KDIS.	4.647	0.607	1	5
<b>(Responsibility global environment)</b> I gain the importance of personal responsibility in a global environment after studying at the KDIS.	4.607	0.615	2	5
<b>(Gender equality)</b> After I studied in the global environment, my opinion on gender equality has been improved.	4.399	0.863	1	5
<i>Global Competence</i>				
<b>(Knowledge in global perspective)</b> My study at the KDIS helps me to gain	4.728	0.523	2	5

knowledge in global perspectives (economy, political, social, and cultural).				
<b>(Cross-cultural competence)</b> I think that I gain cross-cultural competence after studying at the KDIS.	4.717	0.539	3	5
<b>(Attitude/Behavior in global community)</b> I think that I have (will have) better opportunities to work in international organizations such as the UN, with my master's degree at the KDIS.	4.419	0.888	1	5

### 6.1.2 Effects on Job Satisfaction

This study conducted factor analysis for variables including application, improvement on work, performance assessment, self-confidence, and use of network. This study applied factor analysis to check the validity of the major constructs, using principal component analyses as the extraction method and Varimax rotation methods with Kaiser Normalization. The results of the factor analyses show that items represent major variables, with Eigen values greater than 1.00. Table 13 summarizes the results of factor analysis.

**Table 13. Component Matrix for Application, Improvement on Work, Performance Assessment, Self-Confidence, & Use of Network**

Items (Observed variables)	Factor loading						Dimension
	1	2	3	4	5	6	
Utilize knowledge and skills	0.863						Application
Improve expertise	0.869						
Understand of policy issues	0.806						
Ability to understand data	0.789						
Enhance capability at work		0.828					Improvement on work
Improvement of capacity		0.893					
Improvement of system		0.834					
Promotion opportunity			0.838				Performance assessment
Wage increases			0.853				
Job opportunity			0.844				
Job performance			0.784				
Self-esteem				0.766			Self-confidence
Compassionate to employees				0.847			
Improve attitudes at work				0.872			
Interpersonal relationship					0.877		Use of Network
Build social skills					0.886		
Utilize network in the job					0.735		
Enhance satisfaction						0.845	Job satisfaction
Recommend the school						0.845	

Factor scores were used for regression analyses. For the effects of factors on satisfaction, the overall, the results of the ANOVA find the models significant at the 0.01 level with  $F =$

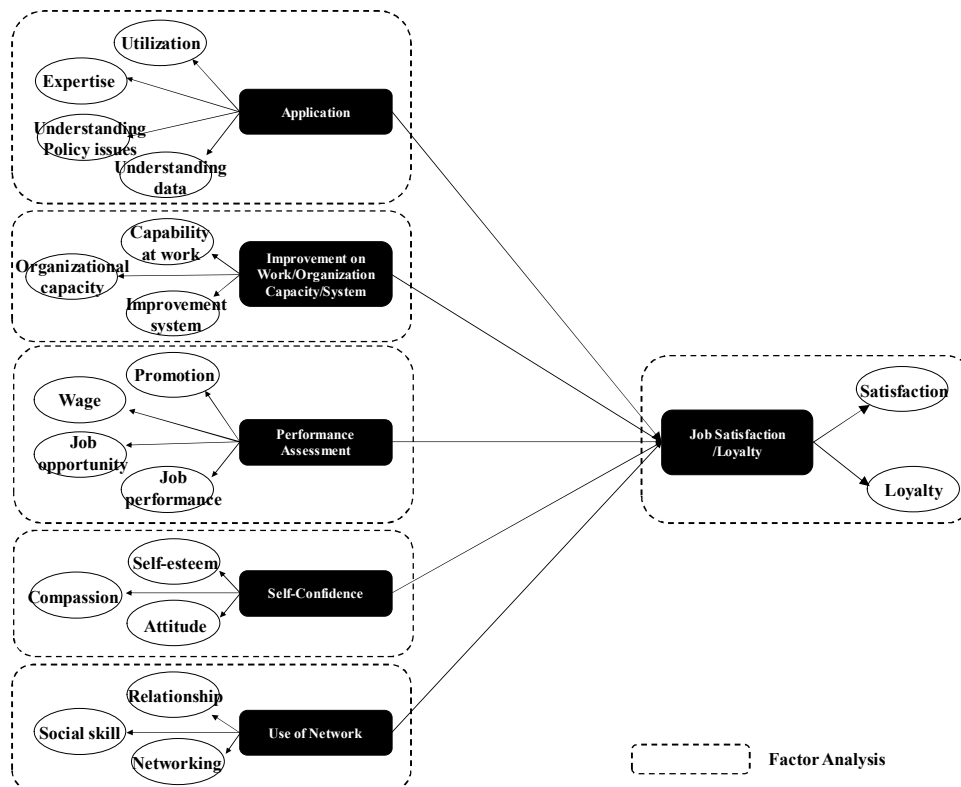
118.74 (*r-square* = 0.631). As Table 14 shows, hypotheses 2, 3, 4, and 5 were accepted.

**Table 14. Effects of Application, Improvement on Work, Performance Assessment, Self-Confidence, & Use of Network on Job Satisfaction**

Variables (Independent → Dependent)	Standardized Coefficient (t-value)	Standardized Coefficient (t-value)
	Regression	SEM
Application → Job satisfaction	0.062 (1.27)	-0.028 (-0.53)
Improvement on work → Job satisfaction	0.202 (3.71 ***)	0.169 (2.96 ***)
Performance assessment → Job satisfaction	0.118 (2.55 **)	0.276 (5.65 ***)
Self-confidence → Job satisfaction	0.323 (6.57 ***)	0.326 (6.32 ***)
Use of Network → Job satisfaction	0.239 (5.41 ***)	0.107 (2.20 **)

\*\*\*Significant at 0.01 (2-tailed); \*\*Significant at 0.05 (2-tailed)

**Figure 2. Effects of Application, Improvement on Work, Performance Assessment, Self-Confidence, & Use of Network on Job Satisfaction**



### 6.1.3 Effects on Global Leadership

This study conducted another factor analysis for variables including leadership, policy improvement, public diplomacy, and global leader. This study also applied principal

component analyses as the extraction method and Varimax rotation methods with Kaiser Normalization. The results of the factor analyses show that items represent major variables, with Eigen values greater than 1.00. Table 15 summarizes the results of factor analysis.

**Table 15. Component Matrix for Application, Improvement on Work, Performance Assessment, Self-Confidence, & Use of Network**

Items (Observed variables)	Factor loading				Dimension (Latent variable)
	1	2	3	4	
Encourage employees	0.834				Leadership
Commitment to public interest	0.870				
Help improve leadership	0.853				
Enhance government trust		0.855			Policy Improvement
Build perspective on policy issues		0.841			
Coordinate organizations		0.893			
Enhance partnership			0.844		Public Diplomacy
Understanding of foreign policy			0.843		
Build public diplomacy			0.919		
Opportunity to be leaders				0.831	Global Leader
Thinking in global community				0.911	
Attitude/Behavior in global community				0.912	

Factor scores were used for regression analyses. For the effects of factors on global leader, the overall, the results of the ANOVA find the models significant at the 0.01 level with  $F = 159.74$  ( $r\text{-square} = 0.581$ ). As Table 16 and 17 show, hypotheses 6, 7, and 8 were accepted at 0.01 level.

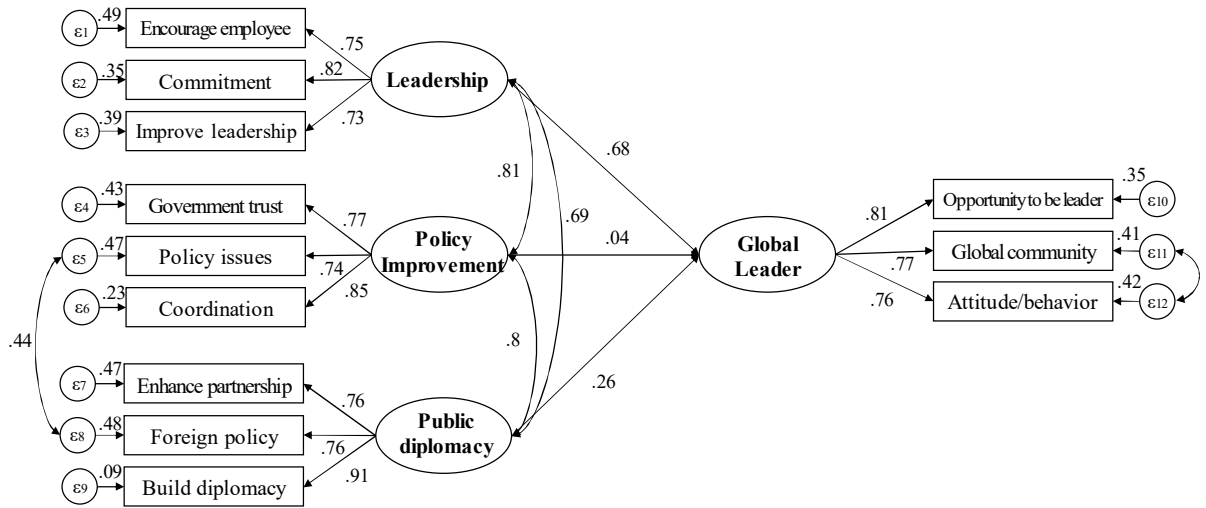
**Table 16. Effects of Leadership, Policy Improvement, & Public Diplomacy on Global Leader**

Variables (Independent → Dependent)	Standardized Coefficient (t-value)	
	Regression	SEM
Leadership → Global leader	0.459 (9.31 ***)	0.475 (10.34 ***)
Policy improvement → Global leader	0.176 (3.17 ***)	0.179 (3.21 ***)
Public diplomacy → Global leader	0.222 (4.40 ***)	0.176 (3.54 ***)

\*\*\*Significant at 0.01 (2-tailed); \*\*Significant at 0.05 (2-tailed)



**Figure 3. Structural Equation Model for Leadership, Policy Improvement, Public Diplomacy, & Global Leader**



**Note:**  $\chi^2$  (51)= 691.17,  $P < 0.01$ ; RMSEA = 0.189; CFI=0.759; TLI=0.688; required to be modified. There are some variables with high covariance.

Based on structural equation modeling, effects of leadership and public diplomacy affects global leader significantly.

**Table 17. Summary of Structural and Measurement Model Estimates**

	Std. Coef.	Std. Err	z-value	P-value	Sig.
<b>Measurement Model Estimate</b>					
Leadership → Encourage employee	0.750	0.285	26.28	0.000	***
Leadership → Commitment to public interest	0.823	0.024	34.69	0.000	***
Leadership → Help improve leadership	0.729	0.030	24.24	0.000	***
Policy improvement → Enhance government trust	0.774	0.026	29.76	0.000	***
Policy improvement → Build perspective on policy issues	0.745	0.028	26.34	0.000	***
Policy improvement → Coordinate organizations	0.853	0.021	40.48	0.000	***
Policy diplomacy → Enhance partnership	0.755	0.027	28.07	0.000	***
Policy diplomacy → Understanding of foreign policy	0.759	0.018	28.74	0.000	***
Policy diplomacy → Build public diplomacy	0.906	0.025	51.48	0.000	***
Global leader → Opportunity to be leaders	0.808	0.025	31.76	0.000	***
Global leader → Thinking in global community	0.765	0.029	26.66	0.000	***
Global leader → Attitude/Behavior in global community	0.761	0.029	26.29	0.000	***

**Note:**  $\chi^2$  (46)= 125.29,  $P < 0.01$ ; RMSEA = 0.070; CFI=0.970; TLI=0.957; \*\*\*Significant at 0.01 (2-tailed);

### 6.1.4 Effects on Globalization

This study conducted another factor analysis for social responsibility, global competence,

and global leader. This study also applied principal component analyses as the extraction method and Varimax rotation methods with Kaiser Normalization. The results of the factor analyses show that items represent major variables, with Eigen values greater than 1.00. Table 18 summarizes the results of factor analysis.

**Table 18. Component Matrix for Social Responsibility, Global Competence, & Globalization**

Items (Observed variables)	Factor loading			Dimension (Latent variable)
	1	2	3	
Global interconnectedness	0.887			Social Responsibility
Responsibility global environment	0.899			
Gender equality	0.802			
Knowledge in global perspective		0.887		Global Competence
Cross-cultural competence		0.881		
Attitude/Behavior in global community		0.728		
Thinking in global community			0.911	
Attitude/Behavior in global community			0.912	

Factor scores were used for regression analyses. For the effects of factors on global leader, the overall, the results of the ANOVA find the models significant at the 0.01 level with  $F = 220.74$  ( $r\text{-square} = 0.569$ ). As Table 19 and 20 show, hypotheses 9 and 10 were accepted.

**Table 19. Effects of Social Responsibility & Global Competence on Globalization**

Variables (Independent → Dependent)	Standardized Coefficient (t-value)	
	Regression	SEM (z-value)
Social responsibility → Globalization	0.493 (10.07 ***)	0.496 (11.28 ***)
Global competence → Globalization	0.320 (6.53 ***)	0.305 (6.55 ***)

\*\*\*Significant at 0.01 (2-tailed); \*\*Significant at 0.05 (2-tailed)

**Table 20. Summary of Structural and Measurement Model Estimates**

Standardized	Std.Coeff.	Std.Err	z-value	P-value	Sig.
<b>Structural Model Estimate</b>					
Social responsibility → Globalization	0.575	0.078	7.40	0.000	***
Global competence → Globalization	0.305	0.081	3.77	0.000	***
<b>Measurement Model Estimate</b>					
Social responsibility → Global interconnectedness	0.829	0.022	38.11	0.000	***
Social responsibility → Responsibility global environment	0.881	0.019	46.93	0.000	***
Social responsibility → Gender equality	0.661	0.034	19.45	0.000	***
Global competence → Knowledge in global perspective	0.841	0.023	36.84	0.000	***
Global competence → Cross-cultural competence	0.846	0.023	37.52	0.000	***
Global competence → Opportunity to work international	0.558	0.041	13.47	0.000	***

Note:  $\chi^2$  (24)= 83.730,  $P < 0.01$ ; RMSEA = 0.085; CFI=0.967; TLI=0.951

### 6.1.5 Effects on Attitude of Hosting Country

This study conducted another factor analysis for affective, cognitive, and behavioral variables and attitude on Korea. This study also applied principal component analyses as the extraction method and Varimax rotation methods with Kaiser Normalization. The results of the factor analyses show that items represent major variables, with Eigen values greater than 1.00.

Table 21 summarizes the result of factor analysis.

**Table 21. Component Matrix for Affective, Cognitive, & Behavioral Variables**

Items (Observed variables)	Factor loading			Dimension (Latent variable)
	1	2	3	
Friendly feelings about Korea	0.898			Affective
Interact with Korean culture and people	0.937			
Continuing interests in Korea	0.883			
Improved knowledges about Korea		0.897		Cognitive
Positive images toward Korea		0.897		
Involve in community related to Korea			0.939	Behavioral
Involve strengthening partnership with Korea			0.939	

Factor scores were used for regression analyses. For the effects of factors on attitude on Korea after studied degree program, the overall, the results of the ANOVA find the models significant at the 0.01 level with  $F = 157.1$  ( $r\text{-square} = 0.580$ ). As Table 22 and 23 show, hypotheses 11, 12, and 13 were accepted.

**Table 22. Effects of Affective, Cognitive, & Behavioral Variables on Attitude**

Variables (Independent → Dependent)	Standardized Coefficient (t-value)	
	Regression	SEM
Affective component → Attitude (After)	0.458 (8.79 ***)	0.487 (11.20 ***)
Cognitive component → Attitude (After)	0.223 (4.24 ***)	0.212 (4.64 ***)
Behavioral component → Attitude (After)	0.178 (3.90 ***)	0.177 (4.19 ***)

\*\*\*Significant at 0.01 (2-tailed); \*\*Significant at 0.05 (2-tailed)

Figure 4. Structural Equation Model for Affective, Cognitive, Behavioral Variables, & Attitude

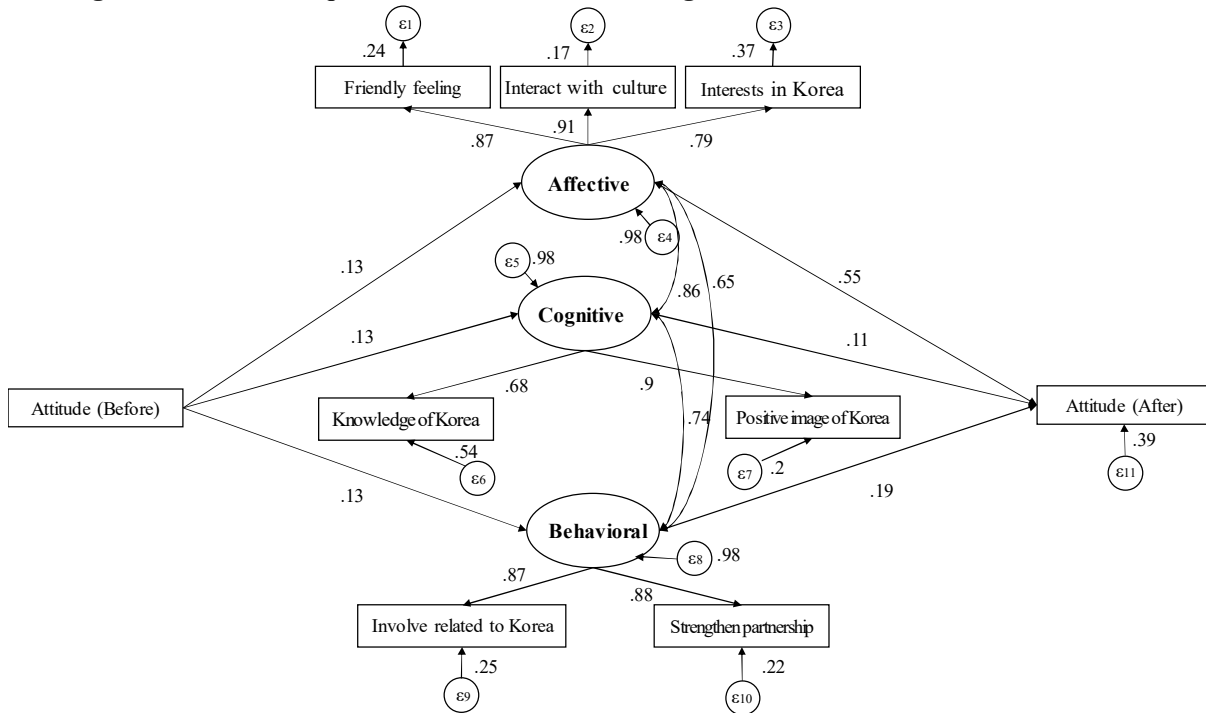


Table 23. Summary of Structural and Measurement Model Estimates

	Std.Coef.	Std.Err	z-value	P-value	Sig.
<b>Structural Model Estimate</b>					
Attitude (Before) → Affective	0.125	0.056	2.26	0.024	**
Attitude (Before) → Cognitive	0.125	0.059	2.15	0.032	**
Attitude (Before) → Behavioral	0.130	0.057	2.28	0.023	**
<b>Measurement Model Estimate</b>					
Affective → Attitude (After)	0.549	0.103	5.33	0.000	***
Cognitive → Attitude (After)	0.107	0.129	0.83	0.408	
Behavioral → Attitude (After)	0.186	0.067	2.78	0.005	***
Affective → Friendly feelings about Korea	0.874	0.017	52.92	0.000	***
Affective → Interact with Korean culture and people	0.090	0.014	63.91	0.000	***
Affective → Continuing interests in Korea	0.791	0.023	34.29	0.000	***
Cognitive → Improved knowledges about Korea	0.677	0.033	20.23	0.000	***
Cognitive → Positive images toward Korea	0.897	0.024	37.27	0.000	***
Behavioral → Involve in community to Korea	0.868	0.023	37.03	0.000	***
Behavioral → Involve strengthening partnership	0.881	0.023	38.26	0.000	***

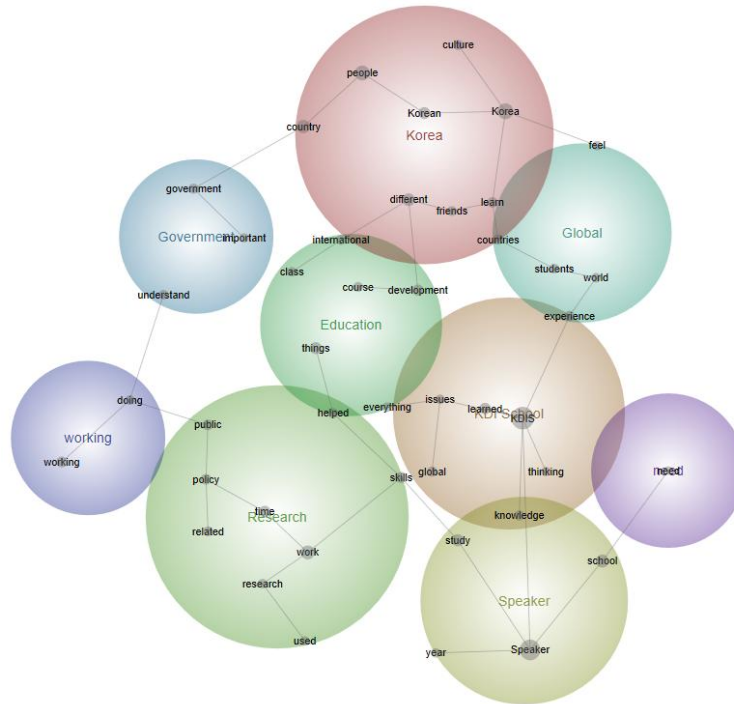
Note:  $\chi^2(20) = 62.21, P < 0.01; RMSEA = 0.078; CFI = 0.978; TLI = 0.960$

## 6.2 Qualitative Research

### 6.2.1 Pre-test

The results provide the list of concepts based on weighted frequency of words in sentences such as KDI School, Global, Korea, Research, Education, Government, Working, and other concepts (Figure 5).

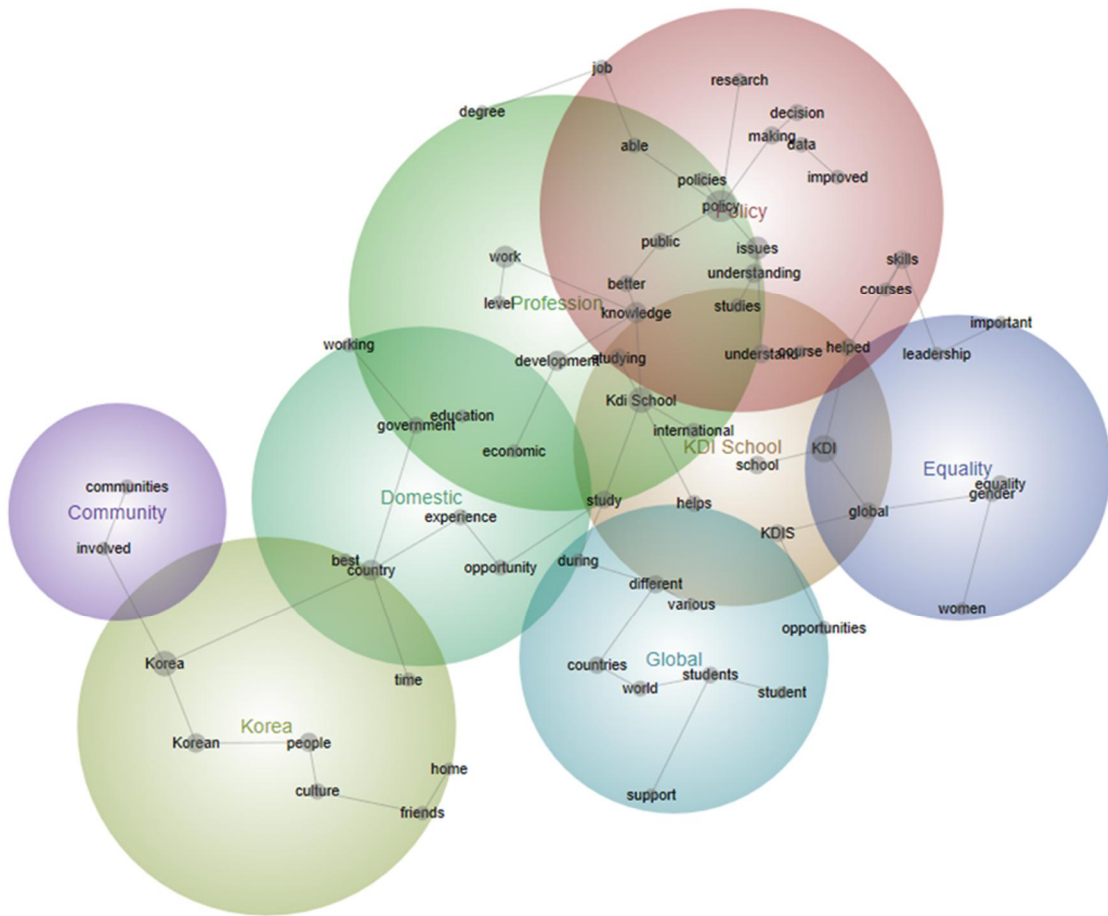
**Figure 5. Themes with Cognitive Mapping for Pre-test**



### 6.2.2 Main Study

Cognitive mapping of main study with all qualitative data is classified 59 concepts into 8 clusters including policy, profession, domestic, KDI School, global, Korea, equality, and community (Figure 6). As shown in Table 24, the results provide the list of concepts based on weighted frequency of words in sentences such as policy (i.e., public, issues, courses, understanding, studies, improved, decision, knowledge, skills, research, etc.), profession (e.g., development, education, knowledge, work, degree, KDI School, international, etc.), domestic (e.g., education, government, economic, experience, opportunity, etc.), KDI School (e.g., international, global, study, helps, different, etc.), Global (e.g., students, world, countries, different, opportunities, etc.), Korea (e.g., Korean, people, culture, home, friends, etc.), equality (e.g., equity, global, leadership, women, important, etc.), and communities (e.g., communities, involved, etc.)

**Figure 6. Themes with Cognitive Mapping of All Qualitative Data**



**Table 24. List of Clusters with Related Concepts**

	Clusters	Concepts	Hits	Example
1	Global	students, world, countries, different, opportunities.	93,094	The best decision I have made so far in my career life was to study at the KDI School. The knowledge I gained from KDI has helped me to think globally. The diverse students of KDI provide an enabling environment to enhance one's global mindset. I had the opportunity to meet students from over 80 countries, studying and interacting within the same environment. This to me, is that like have the world in one place and it provided me with the opportunity to appreciate cultural diversity.
2	Policy	public, issues, courses, understanding, studies, improved, decision, knowledge, skills, research	2,410	KDI School is all about public policy so my study at KDI definitely helps me understand policy issues. For example when should government intervene in a market regarding trade policy. I feel myself greatly contributing to the student's understanding and applying those research skills in public policy research.

3	KDI School	international, global, study, helps, different	1,438	I think KDI School courses are perfectly matching with what an evidence-based policy analyst should have. i got in the KDIS was excellent as it has a global environment of teaching at the same the participation of all students from over the world really make it a very good institution in terms of international students
4	Profession	development, education, knowledge, work, degree, KDI School, international	1,278	Courses are given by professors who are experts and respected in each of their fields. As I stated before, studying at KDI equipped me with the necessary tools to excel both in an academic and professional environment.
5	Domestic	education, government, economic, experience, opportunity	891	Ease of communication with South Korean partners professionally, while at a personal level a quick establishment of a good working rapport with office's South Korean colleagues. I receive a good opportunity to strengthen the cooperation between my country and Korea in a number of policy aspects, especially after having a new government "a transition let-democratic."
6	Korea	Korean, people, culture, home, friends	874	Korean customs are rare to be found in any planet and it has rich culture, Kimchi is sliced cabbage, when entering a Korean home, I must remove my shoes, eating rice with almost every meal, Korean are exercising their right to protest is different from other countries. KDI School was a great experience to learn how to communicate with people from different backgrounds, cultures, and opinions. That skill has been very important in my career, particularly when I have to lead projects.
7	Equity	equity, global, leadership, women, important	640	In different courses I took in KDI School, gender equality was given utmost importance. It was mentioned that in case of any policy, gender equality in a global context must be maintained to get the full benefit of the policy. Thus studying at KDI School helps me to understand the importance of gender equality in a global context. My interactions with the global community at KDI School assisted me to appreciate the importance of gender equality, as well as equity and to champion the same here in Kenya.
8	Community	communities, involved	366	I was involved in the Sejong Locals community and the pan Hellenic Greek Community. I am Updated with events and activities that are available if I wish to attend when I travel back to Korea.

This study also applied NVivo, qualitative software to identify main themes based on word frequency. The following figure (Figure 7 and 8, Table 25) provides major themes (i.e.,

major conceptual words) based on auto-coding. Major conceptual keywords include i) improvement on work after studies at KDI School; ii) career/promotion; iii) networking; iv) Job satisfaction; v) leadership; vi) policy issues; vii) partnership with Korea; viii) global environment and mindset; ix) gender and equality; x) image about Korea; xi) feeling about Korea; and xii) community about Korea.

**Figure 7. Themes with Cognitive Mapping of All Qualitative Data**

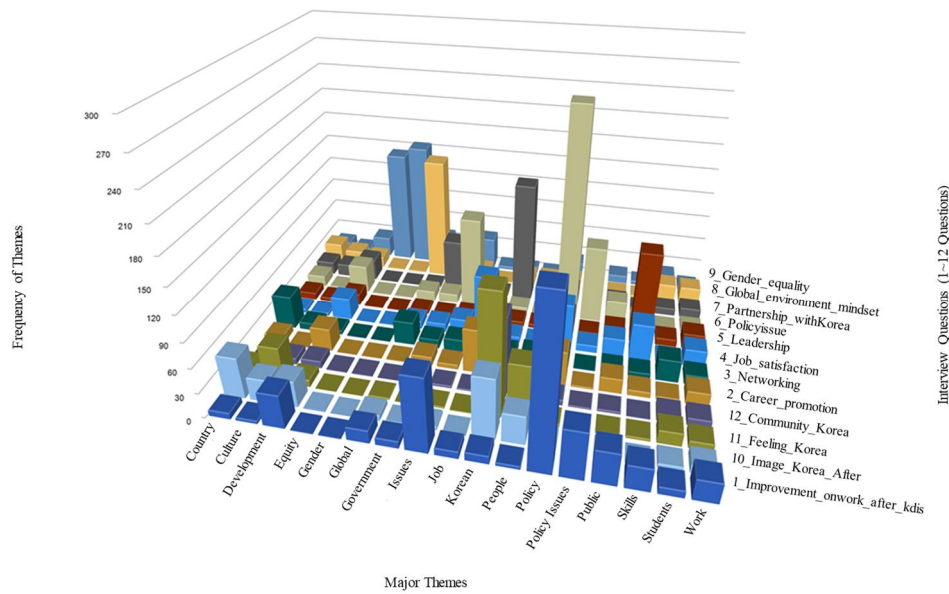
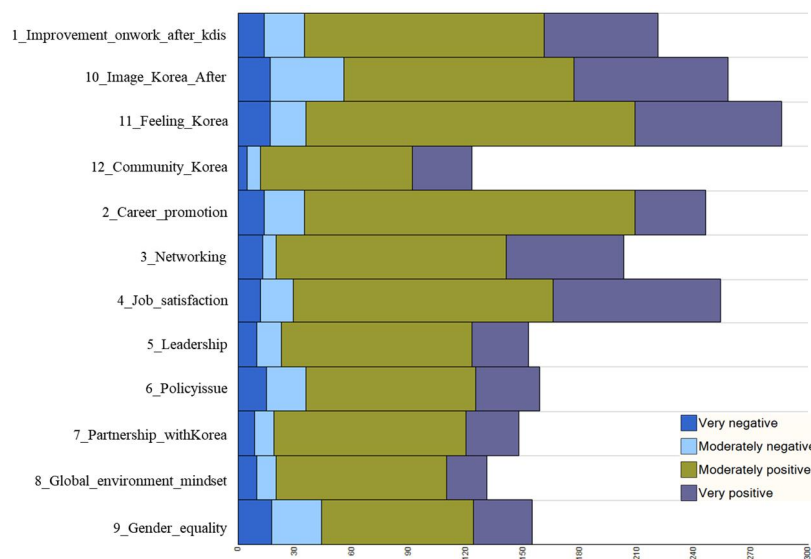


Figure 7 and Table 24 provide sentimental analysis based on auto-coding.

**Figure 8. Sentimental Analysis based on Auto-coding**





**Table 25. Sentimental Analysis based on Auto-coding**

Major Themes	Very Negative		Moderately Negative		Moderately Positive		Very Positive	
	Count	Percentage	Count	Percentage	Count	Percentage	Count	Percentage
Improvement work	14	6.33%	21	9.50%	126	57.01%	60	27.15%
Image Korea	17	6.59%	39	15.12%	121	46.90%	81	31.40%
Feeling Korea	17	5.94%	19	6.64%	173	60.49%	77	26.92%
Community Korea	5	4.07%	7	5.69%	80	65.04%	31	25.20%
Career Promotion	14	5.69%	21	8.54%	174	70.73%	37	15.04%
Networking	13	6.40%	7	3.45%	121	59.61%	62	30.54%
Job Satisfaction	12	4.72%	17	6.69%	137	53.94%	88	34.65%
Leadership	10	6.54%	13	8.50%	100	65.36%	30	19.61%
Policy Issues	15	9.43%	21	13.21%	89	55.97%	34	21.38%
Partnership w/ Korea	9	6.08%	10	6.76%	101	68.24%	28	18.92%
Global Environment	10	7.63%	10	7.63%	90	68.70%	21	16.03%
Gender Equality	18	11.61%	26	16.77%	80	51.61%	31	20.00%

Figure 9 provides word cloud to visualized and share data of inter-relationships with the most comprehensive range of visualizations (<https://www.qsrinternational.com>).

**Figure 9. Word Cloud with Major Conceptualized Keywords**



**Table 26. List of Major Word Frequency based on Similarity**

	Word	Count	%	Similar words
1	kdis	1,907	2.90	kdi
2	korea	2,039	3.11	korea, koreas, korean, koreanized, koreans, 'koreans
3	schools	982	1.50	school, schooling, schools
4	policy	980	1.49	policies, policy, policy'
5	studying	843	1.29	studied, studies, study, studying
6	works	819	1.25	work, worked, working, works
7	country	818	1.25	countrie, countries, countries', country
8	helps	729	1.11	help, helped, helpful, helping, helps
9	developments	634	0.97	develop, develope, developed, developement, developing, development, development', development', developments, developped, developping, develops
10	get	619	0.94	get, gets, getting
11	understanding	525	0.80	understand, understanding
12	backed	500	0.76	back, backed, backing
13	peoples	483	0.74	people, 'people', peoples
14	answer	449	0.68	answer, answered, answering, answers
15	issues	426	0.65	issue, issues
16	culture	424	0.65	cultural, culturally, culture, cultures
17	making	393	0.60	make, makes, making, makings
18	opportunity	385	0.59	opportune, opportunities, opportunity
19	improve	377	0.57	improve, improved, improvement, improvements, improves, improving
20	globally	361	0.55	global, globalization, globalized, globally
21	knowledge	354	0.54	knowledge, knowledgeable, knowledged, knowledges
22	skills	351	0.54	skill, skilled, skills
23	students	343	0.52	student, students, students'
24	government	337	0.51	governance, governed, gouvernement, government, governments
25	differs	336	0.51	differ, difference, differences, different, differently, differs
26	learned	319	0.49	learn, learned, learning, learnings, learns
27	job	305	0.47	job, jobs
28	experiences	297	0.45	experience, experiences
29	gender	288	0.44	gender, genders
30	courses	279	0.43	course, courses
31	community	272	0.41	communal, communicate, communicated, communicates, communicating, communication, communications, communicative, communities, community
32	friends	266	0.41	friend, friendly, friends, friends'
33	internationally	262	0.40	intern, internal, international, internationally, internationals
34	relations	253	0.39	relate, related, relation, relational, relations, relative, relatively, relatives
35	thinking	252	0.38	think, thinking
36	public	248	0.38	public, 'public, "public, publications
37	knowing	232	0.35	know, knowing, knows
38	equality	228	0.35	equal, equality, equally
39	network	222	0.34	network, networking, networks
40	world	222	0.34	world
41	promotion	214	0.33	promote, promoted, promotes, promoting, promotion, promotions
42	research	198	0.30	research, researched, researcher, researchers, researches
43	economic	193	0.29	economic, economical, economically, economics
44	decision	177	0.27	decision, decisions
45	project	177	0.27	project, projection, projects
46	involved	176	0.27	involve, involved, involvement, involves, involving
47	position	176	0.27	position, positioned, positions, positive, positively
48	year	173	0.26	year, yearly, years

49	organized	171	0.26	organic, organization, organizations, organizations', organize, organized, organizer, organizes, organizing
50	leadership	170	0.26	leadership, leaderships

## VII. Conclusion

The purpose of this study is to investigate mediate and long-terms effects of international students in higher education in global environment for human capital development. For mediate effects, this study proposed effects of factors including application at work, improvement on work/organization/system, performance assessment, self-confidence, and use of network on job satisfaction. For long-term, this study examined effects of leadership skills, policy improvement, and improved public diplomacy on global leadership and perceived social responsibility and global competence on globalization. This study also investigates effects of international graduates' perceived affection, cognition, and behavior about hosting country on improved image of hosting country. This study conducted quantitative and qualitative researches using international alumni of KDI School that has contributed to educate international students from 132 countries as part of ODA and human capital development.

For mediated effects, the results of this study found that effects of improvement on work, performance assessment, self-confidence, and use of network showed significant on job satisfaction. The effect size was greater with self-confidence on job satisfaction. For long-term effects, the study found that effects of leadership skills, policy improvement, and public diplomacy showed significant on global leader. The study also found that effects of social responsibility and global competence showed significant on globalization. Results of this study also found that affective, cognitive, and behavioral components significantly affect attitude toward the Korea. Additionally, this study found that more than 59.5% was promoted, while 18.36% was expected to be promoted. This study also found that 65.73% had new job opportunities after graduation.

The results of cognitive mapping from qualitative research found that 8 clusters including policy, profession, domestic, KDI School, global, Korea, equality, and community are associated with KDIS. The results also provide the list of concepts based on weighted frequency of words in sentences such as policy (i.e., public, issues, courses, understanding, studies, improved, decision, knowledge, skills, research, etc.), profession (e.g., development, education, knowledge, work, degree, KDI School, international, etc.), domestic (e.g., education, government, economic, experience, opportunity, etc.), KDI School (e.g., international, global, study, helps, different, etc.), Global (e.g., students, world, countries, different, opportunities, etc.), Korea (e.g., Korean, people, culture, home, friends, etc.), equality (e.g., equity, global, leadership, women, important, etc.), and communities (e.g., communities, involved, etc.).

The results of this study found that KDIS's academic empowerment in global environment help improve job satisfaction, global leadership, and perceived globalization. The results also implied how higher education in global environment plays key role to enhance image of hosting country, Korea and contributes to build strengthen global networks significantly. Further, up to date established alumni associations connecting global alumni association network contribute to build globalization and enhance the global potion of the nation, South Korea. The impact could be paralleled with globally successful K-pop, K-prevention of epidemics, etc., by highlighting the higher education. Diverse and even increasing the number of scholarship programs help foster to construct global networks by sharing knowledge. Lönnqvist, Laihonen, Cai, and Hasanen, (2018) addressed that international collaboration in the field of higher education is becoming a beneficial way of developing countries to acquire human capital from more developed countries. Kim (1998) also stated that for developing countries, importing advanced knowledge which was created by developed countries opens a new horizon for human capital accumulation. The results of this study confirmed that better policy and

management of higher education should be expanded by improving human capital development in globalized environment and by highlighting global citizenship through higher education. Effects on hosting country also provided implications how international graduates from various countries help yield global communication and improve public diplomacy.

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<https://www.qsrinternational.com/nvivo/nvivo-products/nvivo-12-plus>