

GLOBAL KOREA SCHOLARSHIP PROGRAM (GKS) AND SCIENCE DIPLOMACY POLICY: AN EXPLORATORY ANALYSIS BASED ON THE PROGRAM THEORY

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INTRODUCTION

Many issues of public interest such as climate change, famine, poverty, migration, nuclear energy, and many others, require complex debate and joint decision-making among countries. By sharing the same framework, vision, and goals through the Sustainable Development Goals (SDGs), nations can strengthen their partnerships in pursuit of more sustainable development. It also improves countries' reputations in the international community and the quality of cooperation between nation-states by building trust.

Science plays an essential role in international relations because it enables the cooperation to achieve foreign policy goals. While hard power is based on the use of economic and military pressure to influence the behavior of other countries, soft power is more subtle and implies the use of cultural resources, values, and policies to influence and persuade other countries (Nye, 2008).

Science diplomacy is a term that has yet to be defined, but it helps to understand the use of scientific collaboration to improve international relations and advance national interests as well as scientific goals that transcend these interests (Kaltofen & Acuto, 2018). It often involves collaboration with least developed countries in the hope that this relationship may promote capacity building and provide partner countries with access to a more developed technological ecosystem so that they may enhance their own. These countries also highlight their resources and use compelling narratives to build a reputation and make themselves more attractive on the international arena. This process is costly and time-consuming, as building a solid reputation requires years of planning and work.

Over the past two decades, South Korea (hereafter Korea) has developed many strategies to enhance its soft power as part of its foreign policy. The Global Korea Scholarship (GKS) program, one amongst others, is considered an important tool to achieve this goal.

Korea offers a unique case because it is the first country to successfully transition from a recipient of international aid to a donor country. From 1945 until the late 1990s, the country relied heavily on external assistance to rebuild its economy after the Korean War. The policies pursued by the Korean government resulted in real GDP growth of an annual average of 10 percent between 1962 and 1994 (The World Bank, 2021).

Given its geographic location between China and Japan, the lingering image of the Korean War, and the threat from North Korea, cultural and scientific diplomacy are important diplomatic tools for Korea (Dinnie, 2009, 1; Kim, 2011, 124; Park and Lim, 2014, 80 apud Istad, 2016, p. 53). Since the 2000s, the country has developed many strategies to enhance soft power and improve Korea's global image as part of its foreign policy. These strategies include scholarships (Bader, 2016), development cooperation programs to support developing countries (The World Bank, 2021), and leveraging the cultural influence of Hallyu-the "Korean Wave" (Istad, 2016).



In 2008, President-elect Lee Myung-bak noted that Korea's national brand had fallen behind and developed foreign policy strategies under the slogan "Global Korea" (Jojin, 2015, p.39 apud Bader, 2016). Along with other interventions regarding the education field, GKS was designed to provide international undergraduate and graduate students with opportunities to study at Korean Universities.

Some studies on GKS have been conducted from different perspectives: as a public diplomacy policy (Ayhan, 2016; Ayhan et al., 2021) and as an internationalization policy in higher education (Dew, 2014). It has also been compared with other internationalization policies (Dewi, 2018). Since the program aims to improve Korea's image abroad, studies on participants' perceptions of the program are important (Ahn, 2018; Ayhan & Gouda, 2021; Ayhan & Snow, 2021; Hong et al., 2021; Istad et al., 2021; Jung, 2020; Tam & Ayhan, 2021).

From a different perspective, in this short paper, we will present the first steps to analyze GKS according to the program theoretical assessment proposed by Funnell and Rogers (2011). Using a program theory approach, we seek to understand the logical model or causal processes behind the intervention that contribute to the intended or observed outcomes.

MATERIALS AND METHODS

In this paper, we examine the GKS, an exceptional case in the context of international education in Korea, since it has been implemented for several years and some results are already visible, as demonstrated by other researchers.

Methodologically, we gathered information about the GKS from a variety of sources, including official Korean government documents and secondary data from interviews with policymakers in the Korean media, as well as the results of other studies developed about the program to support the logical model used in policy-making.

RESULTS AND DISCUSSION

This study evaluates the GKS program as foreign policy within the framework of the Program Theory Evaluation proposed by Funnell and Rogers (2011). The evaluation of a program theory (PT) or logic model aims to explain how the action of an intervention leads to a chain of results (outputs, outcomes) that ultimately produce the intended or actual effects.

Program theory is composed of two aspects: a theory of change and a theory of action. The first addresses the key processes or drivers by which change occurs in individuals, groups, or communities, known as the causal hypothesis. The theory of action explains how programs or other interventions are structured to activate these theories of change or the intervention hypothesis. In addition, identifying the expected outcomes and some assumptions made by policymakers helps to unveil the underlying logic of an intervention (Funnell & Rogers, 2011).

To identify the causal hypothesis, we need to examine the situation that is considered a problem in the context of the analyzed experience (which may be explicit and formalized or implicit), the actors whose problem will be solved or mitigated by achieving the specified goal and who are expected to change behavior or targeted by the intervention strategy, and the actors who may be indirectly affected, positively or negatively, by the intervention (Funnell & Rogers, 2011).

Regarding the intervention hypothesis, we want to understand how the state actor intends to promote the expected behavior change among actors and how it intends to sway



the actions of the target group in the expected direction. This may include regulatory and punitive instruments such as taxes, incentives, income transfers, compensation, and social guarantees (Funnell & Rogers, 2011).

In terms of expected outcomes, we seek to clarify what policy-makers hope to achieve with the intervention, including short-term, medium-term, and long-term outcomes, both explicitly and formalized or implicitly (Funnell & Rogers, 2011).

Along with the description of the intervention, we bring some underlying assumptions and latent conditions that must prove true, assuming that the causal hypothesis is valid, so that the intervention shall produce the expected outcomes (Funnell & Rogers, 2011).

As noted earlier, we analyzed the GKS program using the components of program theory. As a core funding project of the National Institute for International Education (NIIED), the GKS aimed to promote international academic exchanges and deepen mutual friendship between Korea and participating countries (National Institute for International Education, 2022). "Building a "Korean premium" brand around the theme of "Global Korea" has become a task for the entire government and is reflected in Korea's international education policy" (Cheongwadae, 2009a apud Ayhan et al., 2021).

Selection of participants is based on academic achievement, and although no prior knowledge of the Korean language is required, students are assigned to language classes. They must demonstrate an advanced level of Korean (TOPIK Level 5) in order to graduate (Ayhan et al., 2021).

Primary evidence (as mentioned in the introduction) has shown that the introduction of scholarships for elite students has helped to build a positive global image and national brand for Korea, confirming the idea that scholarships and academic exchanges are an important educational and foreign policy strategy.

From the data collected, we can derive a number of hypotheses, namely:

Causal hypothesis: in 2008, President-elect Lee Myung-Bak described Korea's global image and national brand as backward (Bader, 2016), which is often associated with the lingering image of the Korean War and the threat of North Korea (Dinnie, 2009, 1; Kim, 2011, 124; Park and Lim, 2014, 80 apud Istad, 2016, p. 53). According to Chung Sang-ki, president of NIIED, most of NIIED's programs are closely related to strengthening the nation's brand image (Jae-hyon, 2011).

Intervention hypothesis: the GKS intends to attract elite students to promote Korea's image within the country and abroad by offering scholarships and other benefits (e.g., visas and career opportunities) in a competitive world-class education system (Bader, 2016). "We need to expand this scholarship program to attract more high-caliber students. We have attracted many Asian students and now we are trying to attract more students from Europe" (Chung Sang-ki in an interview with Jae-hyon, 2011).

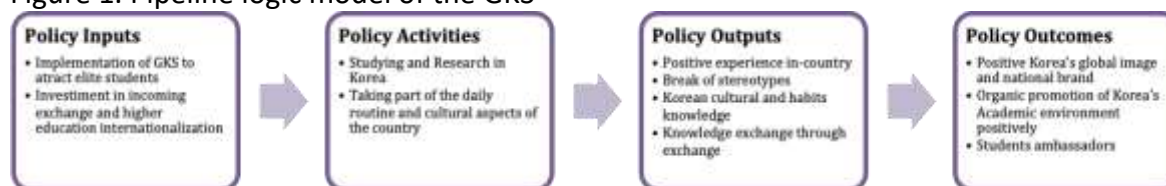
Expected outcomes: The expected behavior change is that the "recipients of the scholarship will convey a positive image of Korea to the rest of the world, such that accumulative results might be expected over time" (Bader, 2016). In the long run, Korea will "become a more multicultural society" (Oh, 2012b) and be able "to build a Korea-friendly network of young talents" (Cheongwadae, 2009b: 14-15 apud Ayhan et al., 2021). Alumni could also be helpful in future international business and trade relations while contributing to Korea's overall research capabilities (Byun & Kim, 2011).

Assumptions of policy-makers: there is a widespread idea among policy-makers, including GSK leaders, that recruiting exchange students will help the country become a more multicultural society and that students will spread good impressions about the host

country, which will contribute to a better common understanding between countries and improve their image abroad. Moreover, education has been one of the main drivers of Korea's remarkable economic growth and democratization (Ministry of Education of South Korea, 2020) and has become a major producer of knowledge around the world.

These hypotheses were fitted to the pipeline logic model (Funnell & Rogers, 2011) in Figure 1, which briefly depicts the causal process between policy implementation and expected outcomes, which, as far as we can tell, were adopted by policy-makers.

Figure 1. Pipeline logic model of the GKS



A survey conducted in 2018 with 1107 students and 584 alumni showed that the cognitive and affective evaluation of GKS recipients improved significantly after their arrival in Korea compared to their evaluation before their arrival in the country (Ayhan et al., 2021). In addition, pieces of news published in famous media reinforced the general public opinion in a positive way. In an interview, an alumnus said that the country has become a more foreigner-friendly space compared to when she studied in Korea (Oh, 2012a).

Since 1967, over 11,000 students from 156 countries have received scholarships. Despite the pandemic context, in 2020, about 3,000 students were studying at 84 universities in Korea with scholarships under the GKS (Ministry of Education of South Korea, 2020). According to the Ministry of Education of South Korea (2020), about 6,500 GKS alumni are active in politics, business, and academia worldwide. This is almost 60% of the participants, which is a very significant number.

As stated by the Office of the President of Korea, building a "Korean premium" brand around the theme of "Global Korea" is an undertaking of the entire government and is reflected in Korea's international education policy (Cheongwadae, 2009a apud Ayhan et al., 2021). However, the biggest challenge with this type of policy, which aims to build or improve a personal impression, is that the outcome can be unpredictable. For this reason, empirical evaluation is needed to verify whether the expected results have been achieved. For example, foreigners' perceptions about Korean society have shown that international mobility programs can result in positive and negative experiences for participants, depending on their positioning in terms of gender, ethnicity, and Korean language proficiency (Hong et al., 2021).

CONCLUSION

As discussed in the program theory evaluation, policy-makers believe that Korea's image should be improved internationally because it had lagged behind and was overshadowed by other circumstances. Under the NIIED, the GKS program was created to attract elite students with scholarships and other benefits in the hope that graduates would project a positive image of the country, thereby improving Korea's social and trade network as well as Korea's overall research and multicultural capabilities.

The use of soft power to influence other nations is an important tool. Scholarship programs have been implemented in many countries, and we find that the policies are becoming more similar over time, possibly influenced by external factors such as other

countries and supranational institutions and the use of their soft power. In this context, it is important for future research to discuss the process of policy diffusion and convergence of science diplomacy policies, especially the international harmonization of policies proposed by UN through the SDG agenda.

The GSK analysis contributes to the discussion of international scholarship programs and their transformative potential, as advocated by Hong et al. (2021). This dovetails with the debate on international collaboration and partnerships as an important tool for achieving the SDG agenda. In other words, understanding the factors that have positively influenced a policy can be helpful for other policy-makers to develop programs that promote academic exchange and ultimately improve the quality of higher education and research.

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