116-0002 ISSN 2423-8260
2-20-7 Arakawa Arakawaku Tokyo Japan

International journal of
human & disaster

2021 6(1)

<Index>

J-INSTITUTE

2021 6(1) 1-8

Submission: 2021/02/10, Peer review: 2021/02/20, Accepted: 2021/02/25, Published: 2021/03/30

International Journal of Human & Disaster

Publisher: J-INSTITUTE
ISSN: 2423-8260

Website: www.j-institute.jp/disaster/
Editor: disaster@j-institute.jp

Corresponding author
E-mail: lwh7152@hanmail.net

dx.doi.org/10.22471/disaster.2021.6.1.01

A Survey on Relatedness between Creation of Urban Parks and Services of Public Servants from Green Space Department(PSGSD)

Dongjun Kim[1]

Daegu Haany University, Gyeongsan Republic of Korea

Wookwang Cheon[2]

Keimyung University, Daegu, Republic of Korea

Wonhyeon Lim[3*]

Daegu Haany University, Gyeongsan, Republic of Korea

Abstract

Purpose: *The purpose of this study is to conduct a survey on the service performance rate of creation of urban parks so that the problems in local governments arising out of that service by the public servants from other department than the ones from green space department will be solved.*

Method: *In this study, we conducted a survey on local government in the nation over the performance rate of the public servants from green space department(the "PSGSD") for the stages of urban park duties: making decisions on creation of urban park; establishment of park creation plan; carrying out construction of park; and park management.*

Result: *In the stage of making decisions of urban park creation, the work performance rate of public servants from green space department in all the local government of the nation is 0% and it is analyzed that no PSGSD has performed the duties to make those decisions. In analyzing average work performance rate of PSGSD for the duties of park creation plan, construction of park creation, and park management out of the duties of urban park creation by local governments, while the average work performance rate of public servants from green space department in Seoul, Jeju Province and other 5 metropolitan cities except for Sejong Special Self-governing city and Gwangju metropolitan city is 100%, the one in Gyeongsangbuk province is 27.8%, the lowest one.*

Conclusion: *Through this study, we can identify the work system of PSGSD the work performance rate of the duties of urban park creation by local governments in the nation. In addition, in this study, we suggest policy plan making the public servants other than PSGSD to carry out the duties of urban park creation so that this study may be utilized as a material of ground for enhancing PSGSD's work performance rate for the duties of urban park creation.*

[Keywords] ***Urban Park, Decision on Urban Park Creation, Establishment of Park Creation Plan, Park Building Construction, Park Management***

1. Introduction

Urban parks in cities not only protect natural scenery of cities but also play a role improving the health, recreation and emotional life of urban residents[1][2]. In Korea, since the first urban park was created in Incheon in 1889[3] and 1960s and as the need for urban parks[4] increases for the reason of expansion of cities, increase of number of city residents and national income improvement throughout rapid industrialization, public servants having professional knowledge have been employed[5][6] to ensure that they perform the duties related to the creation of urban parks.

Person in charge of administrating landscaping works must have ability to prepare drawings, carry out the construction works and conduct thorough supervision on operation of

*This Paper Summarizes Dongjun Kim's Daegu Haany University Master's Thesis.

that construction work. However, in the realty that the system for active utilization of professionals in national administration does not work perfectly, it is pointed out problems that some public servants managing landscaping duties have difficulties in understanding the landscaping and fail to play a role for creating creative external public officers. Notwithstanding, in large number of local governments, there is lack of professionalism and inefficient duties are carried out in performing the duties of urban park creation in other departments including city planning and civil engineering than green space management[7][8].

The area of duties which person specialized in landscaping must and can be in charge of is wide ranging and this can be known from the scope of the laws and regulations on landscaping which are actually lectured in the department of landscape architecture. In other words, it is basically related to the national territory, urban planning and architectural planning and directly related to roads and pedestrians road, parking lots, urban park and green area, natural park, cultural asset, landscaping and disclosed empty site in complex, children's playground, city planning, housing estates and industrial complex as urban planning facility. Another study is needed for a discussion how these duties are to be interrelated in local administrative organizations in detail and whether public servants specialized in landscaping are to deal with these duties. In addition, in this study, it is discussed that the specialization of administrative organizational personnel is to be induced for enhancing ability to make a plan and specialty to ensure that active participation of citizens and private sector will be induced[9][10].

In precedent studies, the followings are discussed or suggested: in central and local government, the public services, license, permission and supervision related to landscaping are presently carried out by public servants not specialized in landscaping; the legal system, work satisfaction and organizational commitment will be enhanced if public servants specialized in landscaping make use of their major and expertise; it is desirable that the divided work classification of forestry and facilities among the duties of public servants be integrated and the group of central government's public servants in charge of forestry and facilities be operated through integration with the group of local government's public servants in charge of green space departments. In addition, a study reports that the duties of landscaping in Japan expanded from the role in green spaces of parks in its promotional period to the planning and supervision of parks' green spaces in the time of enlightenment. This study also reports that the work satisfaction level of the public servants increases when their major and specialty are secured[11][12].

In examining precedent studies, most of the studies have been conducted for the very departments of landscaping which belong to the green space department other than for the departments directly related to the green spaces. Thus, this study analyzes whether PSGSD carry out the duties by work stages for creation of urban parks in local governments in the nation and it is considered that this study may be utilized as a ground for PSGSD to carry out its own duties.

In this study, I surveyed and analyzed the job performance systems and present conditions of PSGSD and the work performance rate of PSGSD by work stages for urban park creation. I also desire to provide basic materials for enhancing the status of PSGSD and improving efficiency and specialty in the duties for urban park creation and make a suggestion for the policy for carrying out the duties related to creation of urban parts.

2. Research Method

2.1. Scope and subject of study

This study abstracts and investigates the duties of PSGSD from the organizational charg of the homepage of local governments in the nation in order to figure out the relevancy of urban park creation and the duties of PSGSD.

2.2. Method of study

In this study, I surveyed and analyzed whether PSGSD carry out the duties of decision making of urban park creation, establishment of park creation plan, construction work of park creation and park management by local governments in the nation in order to figure out the relevancy between the creation of urban parks and the duties of PSGSD. Based on the result of such survey, I conclude that it is necessary for PSGSD to carry out the duties of creation of urban park and make a suggestion of a plan for policy improvement necessary for improving efficiency and specialty of the duties.

2.3. Processing of data

In this study, I surveyed and suggest the work performance rate of PSGSD as a percentage by the stages of duties of urban park creation by local governments for the local government in the nation.

3. Result

3.1. Work performance rate in making decisions on urban park of PSGSD

As a result of survey on local governments in the nation whether PSGSD carry out the duties of making decision on urban parks, it is discovered that the public servants from facilities departments including city planning and general civil engineering other than those from green space departments carry out those duties.

In analyzing the reason thereof, under the 'National Land Planning and Utilization Act', the parks are classified as an infrastructure such as roads, ports, and railways and schools and infrastructure is defined as a city and Gun planning facilities which must be decided and installed as a management plan of cities and Gun. Thus, in local governments, decisions on city park are made and notified while preparing basic plan for cities and Gun and the public servants from facilities departments other than PSGSD carry out the duties related to them, which brings out that result as described above and makes the public servants from facilities departments to carry out even the duties of preparation of city and Gun management plan for making decision making city parks as a facility of city and Gun planing in local governments.

3.2. Work performance rate of PSGSD in establishing park creation plan

In analyzing the work performance rate of PSGSD by 17 cities and Do in establishing park creation plan in local government in the nation, it is discovered that: PSGSD carry out 100% of those duties in 5 metropolitan cities except for Seoul, Jeju and Gwangju metropolitan city; those percentages in other local governments of Gyeonggi, Gwangju metropolitan city, Gyeongsangnam Do, Chungcheongnam Do, Jeollabuk Do, Chungcheongbuk Do, Jeollanam Do, Gyeongsangbuk Do are 84.4%, 83.3%, 57.9%, 56.3%, 33.3%, 22.2%, and 33.3%; and no PSGSD carries out those duties in Sejong Self-governing city. The result of that analysis is as stated in the following <Table 1>.

Table 1. Work performance rate of PSGSD in the duties of establishment of park creation plan in 17 cities and Do(Unit : %).

Item	Seoul	Sejong	Gwangju	Daegu	Daejeon	Busan	Ulsan	Incheon
Perfor-mance rate	100.0	-	83.3	100.0	100.0	100.0	100.0	100.0

Item	Gang-won	Gyeong-gi	Gyeongsang-nam	Gyeongsang-buk	Jeolla-nam	Jeolla-buk	Chungcheong-nam	Chungcheong-buk	Jeju
Perfor-mance rate	26.3	84.4	57.9	16.7	21.7	33.3	56.3	33.3	100.0

In analyzing the work performance rate of PSGSD in establishing park creation plan in local governments in the nation, it is discovered that: the percentages of those duties carried out by PSGSD in Gu, city, metropolitan city, megalopolis city, Do, and Gun are 98.6%, 76.5%,52.9%, and 16.7%, respectively.

3.3. Work performance rate of PSGSD in the duties of construction work of park creation

In analyzing the work performance rate of PSGSD by 17 cities and Do in construction work for park creation in local governments in the nation, it is discovered that: PSGSD carry out 100% in Seoul, 6 metropolitan cities and Jeju; those percentages in other local governments of Gyeonggi Do, Gyeongsangnam Do, Chungcheongnam Do, Jeollanam Do, Jeollabuk, Chungcheongbuk Do, Gangwon Do are 90.6%, 89.5%, 87.5%, 60.9%, 60.0%, 50.0%, and 36.8%; and the percentage in Gyeongsangbuk is 33.3%, the lowest one. The result of that analysis is as stated in the following <Table 2>.

Table 2. Work performance rate of PSGSD in the duties of construction work of park creation in 17 cities and Do(Unit : %).

Item	Seoul	Sejong	Gwangju	Daegu	Daejeon	Busan	Ulsan	Incheon
Perfor-mance rate	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Item	Gang-won	Gyeong-gi	Gyeongsang-nam	Gyeongsang-buk	Jeolla-nam	Jeolla-buk	Chungcheong-nam	Chungcheong-buk	Jeju
Perfor-mance rate	36.8	90.6	89.5	33.3	60.9	60.0	87.5	50.0	100.0

In analyzing the work performance rate of PSGSD in establishing park creation plan in local governments in the nation, it is discovered that: the percentages of those duties carried out by PSGSD in Gu, city, metropolitan city, megalopolis city, Do, and Gun are 100%, 88.2%, 52.9%, and 48.7%, respectively.

3.4. Work performance rate of PSGSD in the duties of park managment

In analyzing the work performance rate of PSGSD by 17 cities and Do in park management in local governments in the nation, it is discovered that: PSGSD carry out 100% in Seoul, 6 metropolitan cities and Jeju; those percentages in other local governments of Gyeonggi Do, Gyeongsangnam Do, Chungcheongnam Do, Jeollanam Do, Jeollabuk, Chungcheongbuk Do, Gangwon Do are 96.6%, 89.5%, 87.5%, 65.2%, 73.3%, 50.0%, and 42.1%; and the percentage in Gyeongsangbuk DO is 33.3%, the lowest one. The result of that analysis is as stated in the following <Table 3>.

Table 3. Work performance rate of PSGSD in the duties of park management in 17 cities and Do(Unit : %).

Item	Seoul	Sejong	Gwangju	Daegu	Daejeon	Busan	Ulsan	Incheon
Perfor-mance rate	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Item	Gang-won	Gyeong-gi	Gyeongsang-nam	Gyeongsang-buk	Jeolla-nam	Jeolla-buk	Chungcheong-nam	Chungcheong-buk	Jeju

Perfor-mance rate	42.1	96.9	89.5	33.3	65.2	73.3	87.5	50.0	100.0

In analyzing the work performance rate of PSGSD in park management in local governments in the nation, it is discovered that: the percentages of those duties carried out by PSGSD in Gu, city, metropolitan city, megalopolis city, Do, and Gun are 100%, 92.1%, 58.8%, and 52.6%, respectively.

4. Discusssion

4.1. Analysis of changes in performance rate by work stages of park creation in 17 cities and Do

In analyzing the performance rate of PSGSD by work stages of park creation duties, it is discovered that: for the duty of making decision on city park, no PSGSD carry out that duty in 17 cities and Do; PSGSD in Seoul, Jeju, and the metropolitan cities of Daegu, Daejeon, Busan, Ulsan and Incheon carry out 100% of duties of establishment of park creation plan, construction work of park creation, and park management except for the duty of making decision on city park; in Gwangju metropolitan city, PSGSD carry out 83.3% of those duties because they carry out 100% of duties of construction work of park creation, and park management except for the duty of establishment of park creation plan. Thus, in order to prevent this result, it is necessary to accumulate successful examples of creation and management of urban park through formation of partnership between government and non-profit organizations[13][14][15][16].

On the contrary, in 8 Do(provinces) except for Jeju, it is analyzed that there is much changes between the work performance rate in duties of establishment of park creation and the one in duties of construction work of urban parks. In Jeollanam Do, while the performance rate of PSGSD in the duties of establishment of park creation plan is 21.7%, the one for the duty of construction work of park creation is 60.9%, which leads much difference by 39.1%. It is discovered that average difference rate between the work performance rate in duties of establishment of park creation and the one in duties of construction work of urban parks in 8 Do(provinces) except for Jeju is 22.3%.

It is analyzed that the regions showing higher than that average difference rate are Kyeongsangnam Do, Chungcheongbuk Do and Jeollabuk Do as well as Jeollanam Do. In analyzing the work performance rate of PSGSD between the duties of construction work of park and park management in 8 Do(provinces), the average difference rate is 3.6% and the region showing the highest one is Jeollabuk Do(13%). It is analyzed that the regions showing higher than that average difference rate are Gyeonggi Do, Gangwon Do, and Jeollanam Do including Jeollabuk Do. On the contrary, 4 regions of Gyeongsangnam Do, Gyeongsangbuk Do, Chungcheongnam Do and Chungcheongbuk Do shows no difference in work performance rate between those duties. This is a phenomenon caused by financial condition of local cities and it is necessary to introduce a system such as national park system which carries out creation and management of urban parks[17][18][19].

4.2. Analysis of differences in work performance rates by stages of creation of parks in megalopolis city, metropolitan city, Do, Gu, city and Gun

In analyzing the performance rate of PSGSD by work stages of park creation duties in local governments classified into Seoul, metropolitan cities, Do, Gu, city and Gun, it is discovered as follows:

For the duty of making decision on city park, no PSGSD carry out in any of local government;

In examining the work performance rate of PSGSD in the duties of establishment of park creation, Gu shows 98.6% , the highest rate and cities, Seoul, metropolitan cities and Do and Gun show 76.3%, 52.9%, and 16.7% in order. Thus the work performance rate of PSGSD in Gun shows very lower one. In examining the work performance rate of PSGSD in the duties of construction work for the parks: PSGSD carry out those duties in every region in Gu and the rates in cities/ Seoul, metropolitan cities and Do/ and Gun are 88.2%, 52.9%, and 48.7% in order. In examining the work performance rate of PSGSD in the duties of park management: PSGSD carry out those duties in every region in Gu and the rates in cities/ Seoul, metropolitan cities and Do/ and Gun are 92.1%, 58.8%, and 52.6% in order. These results show that the duties of PSGSD in big cities and local regions differ and it is necessary to improve system for increasing work performance rate[20].

5. Conclusion

Through this study, it is analyzed that the work performance rates of PSGSD in the duties of park creation differ by the work stages of urban park creation and local governments. In order to enhance those rate in the duties of urban park creation, it is necessary to improve duties system and operation of PSGSD. Most of the policies including the laws and regulations related to the creation of urban parks are carried out by central government. Thus, an integrated policy on urban park creation will be prepared and implemented by unifying the duties system in national and local government services of public servants.

6. References

6.1. Journal articles

[1] Lee H & Ku H & Lim S. The Values and Place-identity of Waterfront Park as Leisure Space in the City. *Korean Journal of Sociology of Sport*, 23(1), 69-82 (2010).

[2] Lee J & Kwon G & Cheon W & Lim W. A Study on the Revitalization of Forest Management by Improving the Implementation Rate of Forest Projects. *International Journal of Human & Disaster*, 5(2), 1-9 (2020). [Article]

[3] Kwak N & Han B & Kwak J. Transition Characteristics of Parks and Green Spaces by the Urban Structural Change in Incheon Metropolitan City. *Journal of Korea Planning Association*, 55(3), 129-144 (2020).

[4] Joo S. Assessment of Contemporary Urban Parks in Korea-satisfaction and Landscape Images. *Journal of the Korean Institute of Landscape Architecture*, 36(4), 36-47 (2008).

[5] Jaegal D. The Role of Work Environment on Job Satisfaction of Local Government Employees. *The Korean Journal of Local Government Studies*, 10(1), 91-111 (2006).

[6] Jeon M & Park J & Lim W. An Investigation on Developing the Shelter and Safety Facilities of Forest Kindergartens. *International Journal of Protection, Security & Investigation*, 5(1), 42-53 (2020). [Article]

[7] Park T & Kim S. A Study on Awareness of Job Characteristics and Job Satisfaction of Landscape Architect Public Officials in Korea. *Journal of the Korean Institute of Landscape Architecture*, 44(6), 148-161 (2016).

[8] Park J & Lim W. Analysis of the Healing Effect of Walking Activities according to the Difference in Forest Environment. *Public Value*, 5(1), 1-16 (2020). [Article]

[9] Lee M. Needs For Establishing Professional Personnel Position of Landscape Architecture in Local Government of South Korea -The Case of Chonju City, Chollabukdo-. *Journal of the Korean Institute of Landscape Architecture*, 27(5), 25-37 (2000).

[10] Yoo H & Song E. The Crisis of Forestry in South Korea and Its Future Direction. *International Journal of Human & Disaster*, 3(2), 14-17 (2018). [Article]

[12] Yoo H & Song E. Plans to Help Forestry Households Overcome Their Crisis through Their Linkage to a 6th Industry in South Korea. *International Journal of Human & Disaster*, 2(2), 23-26 (2017). [Article]
[13] Kim Y & Han S & Zoh K. A Study of Urban Park Development and Management through Public-Private Partnership. *Journal of the Korean Institute of Landscape Architecture*, 39(3), 83-97 (2011).
[19] Kim D & Kim D. A Study on Job Satisfaction of Government Officials in the Public Tourism Sector. *The Academy of Korea Tourism Policy*, 8(3), 71-90 (2002).
[20] Ok W & Kim S. A Study on Job Stress Job Satisfaction and Organizational Commitment of Local Public Officials. *Journal of Korean Public Administration*, 35(4), 355-373 (2001).

6.2. Thesis degree

[11] Park T & Kim S. A Study on Awareness of Job Characteristics and Job Satisfaction of Landscape Architect Public Officials in Korea. Kyunghee University, Doctoral Thesis (2017).

6.3. Additional references

[14] Lim S. A Study on the Direct Row Reorganization Plan for Local Public Official. Korea Research Institute for Local Administration (1997).
[15] Kim B & Lee J. Comprehensive Measures for Competency Development of Local Public Officials. Korea Research Institute for Local Administration (1991).
[16] Cho C & Han S & Kang T & Keon K. Awareness Structure of Local Public Officials and Directions for Improvement of Personnel Administration. Korea Research Institute for Local Administration (1986).
[17] Yeo W. New Changes in the Region by Creation a National Park. Busan Development Institute Policy Focus (2012).
[18] Kim B & Kim S & Sin S. Local Government's Local Public Officials Garden Model Development (Ⅲ). Korea Research Institute for Local Administration (1993).

7. Appendix

7.1. Authors contribution

	Initial name	Contribution
Lead Author	DK	-Set of concepts ☑ -Design ☑ -Getting results ☑ -Analysis ☑ -Make a significant contribution to collection ☑
Corresponding Author*	WL	-Final approval of the paper ☑ -Corresponding ☑ -Play a decisive role in modification ☑
Co-Author	WC	-Significant contributions to concepts, designs, practices, analysis and interpretation of data ☑ -Participants in Drafting and Revising Papers ☑ -Someone who can explain all aspects of the paper ☑

2021 6(1) 8-15

Submission: 2021/02/10, Peer review: 2021/02/20, Accepted: 2021/02/25, Published: 2021/03/30

International Journal of Human & Disaster

Publisher: J-INSTITUTE
ISSN: 2423-8260

Website: www.j-institute.jp/disaster/
Editor: disaster@j-institute.jp

Corresponding author
E-mail: david1@daum.net

dx.doi.org/10.22471
/disaster.2021.6.1.08

Human Rights DISASTER: China's Human Rights Policy toward North Korean Refugees

Sangsoo Lee

Korea National Defense University, Nonsan, Republic of Korea

Abstract

Purpose: *The Purpose of this article is to review China’s abuse of human rights and the use of cultural relativism in dealing with North Korean refugees in China. It also examines China's human rights policy toward North Korean refugees. China treats the North Korean escapees as illegal economic migrants even though there are many reasons to define them as political refugees.*

Method: *To better appreciate the context of Universalism innate in United Nations and U.S. human rights policies for North Korea, this article analyzes the characteristics of the U.S. North Korean Human Rights Act 2012(NKHRA) and China's agreement with the UN human rights covenant. China's repatriation of the North Korean refugees was an unprecedented incident compared with previous cases. China’s human rights policy towards North Korean refugees is unlikely to change in the Xi Jinping regime.*

Result: *This article draws three findings in connection with the universalism of human rights as follows. First, China thinks that human rights universalism is detrimental to their socialism and government attempts to maintain stability. Second, China puts its political priority on keeping good relations with the North Korean leadership and cooperating with the regime.*

Third, China wants to control the North Korean refugees who may bring disorder to the border region by deporting them to the DPRK.

Conclusion: *This article emphasizes China’s negligence concerning its human rights agreement with the UN and concludes that the enhancement of human rights for North Korean refugees in China can be realized by empowering the United Nations High Commissioner for Refugees’(UNHCR) activity in China and convincing China to behave as a responsible stakeholder through pressure from the international community.*

[Keywords] ***Universalism, China, North Korean Refugees, UN, Cultural Relativism***

1. Introduction

China clings to the concept of the relativism of human rights even though it has endorsed an agreement on universal human rights in the UN with concerning North Korean refugees in China. Recently, China has repatriated North Korean refugees regardless of the criticism of world public opinion. Recently China Coronavirus Lockdown complicates North Korean refugee journey to Southeast Asian countries including Laos and Thailand, before ending up South Korea. The road closures have blocked the route which North Korean escape. Tens of thousands of North Korean are at various stages of transit through China or have decided to settle in China illegally.

The International Coalition to Stop Crimes against Humanity in North Korea(ICNK), consisting of over 40 prominent human rights organizations and activists, condemned the expulsion and forced deportation by China. China's repatriation of the North Korean refugees was an unprecedented incident compared with previous cases. China’s human rights policy towards North Korean refugees is unlikely to change in the Xi Jinping regime.

China treats the North Korean escapees as illegal economic migrants even though there are many reasons to define them as political refugees. China seems to be engaged in maintaining the stability of its borders with North Korea rather than enforcing universal principles and its agreement with the UN. Not only states, but also many human rights groups and activists are taking issue with China's violation of North Korean refugees' human rights in this process of repatriation. The right to leave a country to seek asylum abroad and to not be forcibly returned to conditions of danger are internationally recognized rights that North Korea and China, like all other countries, are obliged to observe. This article briefly reviews China's abuse of human rights under the guise of cultural relativism in its behavior toward North Korean refugees in China and examines China's human rights policy towards North Korean refugees. To better appreciate the context of Universalism innate in United Nations and U.S. human rights policies for North Korea, this article analyzes the characteristics of the U.S. North Korean Human Rights Act 2012(NKHRA) and China's agreement with the UN human rights covenant. This article emphasizes China's negligence concerning its human rights agreement with the UN and concludes that the enhancement of human rights for North Korean refugees in China can be realized by empowering the UNHCR's activity in China and convincing China to behave as a responsible stakeholder through pressure from the international community

2. The Abuse of Human Rights, Cultural Relativism, and North Korean Refugees in China

Cultural relativism applied to Human Rights is the assertion that human rights, far from being universal, vary a great deal according to different cultural perspectives. According to this view, China argues that human rights are culturally relative rather than universal. Cultural relativists deny the existence of rights inhering in individual human beings independent of society and culture. They suggest that no pre-social rights can exist, because all values are socially constructed.

The Chinese government holds that the rights of individuals are the concern of their government and not of the international community. Chinese official jurisprudence views human rights not as "natural" but as given by the state, to be limited and defined by law. "Cultural relativists," think some values are better than other values, for example, that material welfare is more important than free speech, or that group solidarity is more important than the rule of law.

For cultural, historical, and economic reasons, China's view of human rights issues is quite different from the view held by westerners who see human rights as universal.

Human rights require that states protect vulnerable individuals and groups against oppression[1]. "If a State dismisses universal human rights based on cultural relativism, then rights would be denied to the persons living under that State's authority." In this context, China is seriously infringing on the human rights of North Korean defectors by sending them back to their homeland.

In China's perception of human rights, there is the concept of relativism which postulates that even though in every culture some moral judgements are valid, no moral judgement is universally valid. Cultural relativists suggest that there is no universal human rights[2]. The socialist perspective on human rights is that countries have different concepts of human rights and liberals should not force them to comply with human-rights concepts different from their own[3].

Universal Human rights reflect a determined effort to protect the dignity of every human being against abuse of power through fundamental rights[4]. "Universal human rights are further established by the two international covenants on human rights (International Covenant on Economic, Social and Cultural Rights, and International Covenant on Civil and Political Rights)."

China's decision not to accept the western concept of human rights is largely oriented by its interest in maintaining domestic stability and authority over its people[5]. China regards the universal values of human rights as actors detrimental to their effort to maintain social stability. It also argues that collective rights are often a precondition for the protection of individual human rights[6].

2.1. Current status of North Korean refugees

The escape from North Korea is a life or death problem for the North Korean people. “North Koreans fleeing to China fit the definition of refugees *sur place*, which UNHCR defines as persons who may not have been considered refugees when they left their country but who later become refugees because they have a fear of persecution upon return.”

If North Korean peoples are detected while trying to escape, they are shot on the spot or taken away to a concentration camp[7]. Even though they succeed in crossing the border, the road to reach South Korea or third countries is very harsh. The usual way to get out of North Korea is a "planned escape" which is achieved by a broker. One pays money to the broker to bring back family members in North Korea. This is the most common way among the North Korean escapees. The broker guides the peoples of the North Korean residents. In this case, North Korean refugees give some amount of resettlement funds to the broker to save their family members in North Korea.

The brokers who guide North Korean refugees to China and the Republic of Korea(ROK) estimate there are about 200 members and they established an organization, the Union for Saving North Korean Refugees in February 2012. They have established a communication networks in both China and South Korea to assist them in the process of saving North Korean refugees. They have their agents in North Korea and share information via Chinese mobile phones.

2.2. China's violation of North Korean refugees' human rights

So far, both China and the ROK have dealt with the delicate North Korean refugee issues in low profile by allowing those who successfully enter the ROK embassy to go on to South Korea. South Korea treats the North Korean refugee issue as low key because of a concern for China which always has to be conscious of North Korean perspectives. Also, “Seoul wants to avoid unnecessary problems in its relations with China, an important trading and political partner[8].” However, recently the refugees who entered the embassy have not found it easy to go on to South Korea due to China's policy change regarding North Korean refugees. China's human rights violations against North Korean refugees can be classified into three categories; the process of arresting, forceful detention, and repatriation; paying proper labor wages, and protecting women and children's rights.

2.3. Arrest and forceful repatriation

The Chinese government is arresting the North Korean refugees and then it sending them forcefully to North Korea via a camp in China. Those who are repatriated are likely to be punished severely for attempting to defect. China is acting only by the wishes of the North Korean regime. Since the beginning of 2012, the Chinese government has been cooperating with the Kim Jung-un regime to crack down on people fleeing from the North.

When the North Korean refugees are detained, there are many human rights violations in the camp such as beatings, forced labor, and lack of basic life necessities. According to the international refugee law, the regime elaborates a specific, albeit narrow, place for foreign migrants within international law. “States commit themselves not to send foreign migrants back to a country where they have a fear of persecution on account of race, religion, nationality, membership in a particular social group[9]."

2.4. An issue of wages

The North Korean refugees who came to China have difficulty in leading their daily lives. At first, they tend to reside in Yeonbyeon and the three Northeast provinces, but as the Chinese government's rigid control has been enforced, they have hidden in the rural area of the megacity. They cannot receive wages properly and suffer from the exploitation of labor due to sudden inspection and unstable social position. When security forces intrude they must hide so as not to be arrested. Even though they are mistreated by the supervisor they cannot complain so as not to disclose their position. That is why most of the second generation of North Korean refugees cannot have access to education in China.

2.5. Issues of woman and children's human rights

The human rights situation for North Korean women and children refugees is getting worse. The North Korean women who escaped from North Korea are vulnerable to human trafficking whether they want or not. Through human trafficking, more often than not they have been sold to bars and clubs for sex slavery or been married to an ethnic Korean man for survival. Due to industrialization, as women in rural areas move to the megacity or overseas, the demand for women eligible for marriage has increased in rural areas. North Korean women who married ethnic Korean men often suffer from domestic violence and sexual abuse.

If North Korean woman refugees are forcefully sent back to North Korea, the children left behind are abandoned by their father. Article 10 of the International Covenant on Economic, Social, and Cultural Rights(ICESCR) stipulates that families should protect children, especially from economic and social exploitation[10]. It also recognizes the right to education and requires signatories to improve child health. Currently, the total number of North Korean refugees in China is about 100,000 of whom 70,000 are women.

2.6. Human rights issues for the North Korean refugees in the process of forceful repatriation

The Chinese government takes a coercive stance by detaining or giving a monetary penalty to the persons who help the North Korean refugees. “The Chinese government offers rewards to citizens who turn in “illegal migrants” and imprisons or imposes fines up to RMB 30,000(USD＄3,600) on those assisting them.”

The definition of forceful repatriation means that it is the process of forcefully returning a person to one's place of origin or citizenship. The North Koreans in China should be protected as refugees for the following reasons.

The forced return of a person to a country where he faces persecution is more specifically known as refoulement. According to the Universal Declaration of Human Rights Article 9. "No one shall be subjected to arbitrary arrest, detention, or exile." The Chinese government regards the North Korean refugees as illegal economic migrants and is abiding by the agreement on repatriation of illegal entrants between China and North Korea. According to the UN Migrant Worker Convention, states must treat individuals with dignity and human respect even if they are undocumented[11].

If we go through the process of forceful repatriation to North Korea, the arrested North Korean refugees are supposed to wait for some time in the Chinese detention camp at border military units for investigation. After the investigation, they are sent back to the North Korean security agency and classified by the level of crimes and then put into proper camps[12].

There are four types of prison and detention facilities in North Korea: *Kwanliso*(political penal labor camps); *Gyowhaso*(correctional or reeducation centers); *Gypgyeolso*(collection centers for low-level criminals); *Lodongdanryeondae*(labor training centers).

The lives of North Korean refugees become more miserable after they are transferred to a camp. In the camps, they must lead their daily lives under severe control by guards while suffering malnutrition and forced labor. The sanitation of the camps is bad; if a prisoner is suffering from an infectious disease it may spread to all the members in the confinement facility. North Korean confinement facilities are very vulnerable to infectious diseases. In the political prison camps, several methods of punishment are used to control prisoners. Punishments include routine beatings, ideology struggle sessions, reduced food rations, extended working hours, time in a punishment chamber, preliminary investigation, secret executions, etc.

3. Recommending Human Rights Universalism to China

China remains highly sensitive to foreign criticism, but it uses its soft power, diplomatic and economic, in the international community to reduce international pressure to improve its human rights policies[13].

Policy options enhancing the human rights of the North Korean refugees in China may result in spreading human rights universalism to China[14]. China refuses international agencies and non-governmental organizations(NGOs) access to the North Koreans who cross its border; this and its periodic practice of forceful deportation, have led many to ask about international law and the protection of North Korean refugees in China. China has to accept the fact that human dignity must be the ultimate foundation of human rights. China defends its treatment of the North Korean refugees by saying that North Korean refugees are almost the same case as the illegal Mexican migrants in the U. S. Unlike the situation in China, many unauthorized migrants in the U.S. are, in some respects, well integrated into the society. They work in formal businesses, own their own homes, shop in neighborhood stores, attend local churches, and send their children to public schools.

In reality, it is very difficult to expect that the Chinese government may change its attitude over the human rights issues of the North Korean refugees. The Chinese government is putting more pressure on the North Korean refugees as time has gone by. China scorns the U.S. human rights recommendations as an intervention in its national sovereignty. The principles stipulated in the Charter of the UN seem to prohibit the United Nations from pursuing its purpose of promoting respect for moral human rights by implementing them firmly as human rights in international law. But the real meaning and legal implications of these principles may not be what they seem to be[15].

In the next section, we are going to map out measures which may cause the Chinese government to abandon its long-standing inconsistent human right policies toward the North Korean refugees.

3.1. Utilization of the UNHCR

The United Nations High Commissioner for Refugees(UNHCR) is the UN agency dedicated to the protection of refugees displaced by conflict, famine, and natural disasters[16]. To overture more realistic policy options toward China, we need to pay attention to the international humanitarian law aside from the Covenant on Refugees[17]. International humanitarian law can apply to all people regardless of their being recognized as refugees or not. It has a system to monitor its execution in various ways different from the covenant on refugees[18]. There are two kinds of relevant international organizations, human rights organizations based on the UN charter and international humanitarian law. The UNHCR is one of the institutions which deals with human rights issues based on the UN Charter. The UNHCR was established by the Commission on Human Rights which is under the control of ECOSOC. It consists of 47 UN members and has sole discretion to review all the human rights issues and relevant situations concerning refugee matters.

The UNHCR has adopted the Universal Periodic Review(UPR) in addition to existing special procedures and complaint procedures which were inherited from the Commission on Human Rights. Such procedures of the UNHCR can be properly utilized for benefit of North Korean refugees who are staying in a third country. The special procedures of the UNHCR are conducted by a working group consisting of five members including individual experts to investigate cases of human rights violations[19]. The organization is supposed to advise based on such investigations. The specific mission of a special procedures investigation is defined by the UNHCR.

A Special Rapporteur on the situation of human rights in the North Korea is directly connected with North Korean refugees[20]. Another Special Rapporteur considers torture and other inhuman treatment. Another Special Rapporteur deals with trafficking in persons, especially women and children, and a fourth Special Rapporteur investigates extrajudicial, summary, or arbitrary executions.

3.2. Complaint procedure

The complaint procedure of the UNHCR is an informal accusation system based on the Commission on Human Rights “1503 procedure.” Any individual or groups including NGOs which have a reliable source can bring human rights violations to the UNHCR.

Accordingly, any North Korean refugee or NGO that recognizes a human rights violation can report by petition to the Complaint Procedure or Special Rapporteur. If the petition is accepted and properly reviewed, the ongoing human rights violation may be addressed.

3.3. Universal periodic review(UPR)

The Universal Periodic Review(UPR) is a mechanism of the United Nations Human Rights Council (HRC) that emerged out of the 2005 UN reform process. The organization periodically examines the human rights performance of all 193 UN member states. Despie its systemic limits, it is remarkable that Canada and the Netherlands took issue with the North Korean refugee problem.

3.4. Resolutions or HRC

The last thing the HRC can do for the specific human rights violation may be adopting a resolution of criticism in public. The resolution may lack the binding force to control but it can give some political burden to the relevant country. It may be possible to adopt a resolution that criticizes the treatment of the North Korean refugees, but it may be almost impossible because of China's political influence in the UN. Because China is a powerful country in the UN, it continues to serve as a member of the Executive Committee of the High Commissioners' Program of UNHCR. UNHCR should raise concerns about this, and other governments on that Committee should also be raising strong concerns about China's actions towards North Korean refugees. China has to respect refugee rights in terms of its legal commitments to fulfill international standards, and doing so is necessary for a member government of the Committee.

4. Conclusion

This paper has analyzed the limits of universalism regarding North Korean refugees in China. Even though China has signed the UN's human rights covenant, it cannot abide by the rules due to its values of human rights relativism. Even though the U.S. has criticized the Chinese government for deporting North Korean refugees in its reauthorized NKHRA, China may emphasize national rights of self-determination. So far, the U.S. concerns about nuclear disarmament have taken precedence over the defense of human rights[21][22][23][24]. The universalism of human rights in China hit a snag due to the clash of values between universalism and relativism. We could draw three findings in connection with the universalism of human rights as follows:

First, China thinks that human rights universalism is detrimental to their socialism and the desire to maintain stability. It advocates that collective rights are often a precondition for the protection of individual human rights. The veil of cultural relativism should not be a hiding place for a China that is engaged in serious violations of the human rights of the North Korean escapees[25]. "The denial or abuse of human rights is wrong, regardless of the violator's culture." Even though universalism in its current state is not the ideal solution; cultural relativism has great problems and a potential for abuse.

Second, China made its political priority to keep good relations with the North Korean leadership by cooperating with the regime[26]. Beijing cares about its traditional alliance with Pyongyang and so deports the North Korean refugees. The forced return of escapees to North Korea where they face persecution can be more specifically known as refoulement which can be called a naked abuse of cultural relativism. Third, China wants to check the North Korean refugees who may cause disorder in border regions by deporting them to the DPRK. Beijing wants to eradicate elements causing potential domestic instability[27]. It does not welcome the crimes committed by the North Korean refugees such as black market activities.

China deports North Koreans without affording them any access to a screening process whereby their claims for refugee status could be accessed[28]. Deporting North Koreans not only leads to their imprisonment and other abuses, it also encourages trafficking, forcing North Korean women who fear repatriation into forced marriages, prostitution, and physical and psychological abuse. The enhancement of human rights for North Korean refugees in China can be realized by empowering the UNHCR's activity in China to take care of human rights issues about North Korean Refugees. It would be more efficient to use the combined influence of the UN, U.S, and EU in the process of changing China's view towards the North Korean refugees.

Especially, the European parliament has called upon China to honor its obligations under international law(e.g., the Convention Relating to the Status of Refugees and the Convention against Torture) and to stop repatriating North Korean citizens back to the DPRK, as returnees and their families are at great risk of abuse and even execution. On a practical level, the increased attention to human rights may spur efforts to strengthen human rights concerns over North Korean refugees in China.

5. References

5.1. Journal articles

[1] Rolf K. Coherent Approach to Human Rights. *Human Rights Quarterly,* 17(2), 323-342 (1993).

[3] Randall P. Human Rights, China, and Cross-cultural Inquiry: Philosophy. History, and Power Politics. *Philosophy East & West*, 55(2), 283-283 (2005).

[5] Yitan lA. Cooper Drury. Threatening Sanctions When Engagement Would be More Effective: Attaining Better Human Rights in China. *International Studies Perspectives*, 5(4), 384-385 (2004).

[7] Nicole H. Politicizing U.S. Refugee Policy toward North Korea. *Yale Journal of International Affairs*, 1(2), 73-73 (2006).

[8] Lankov A. North Korean Refugees in Northeast China. *Asian Survey*, 44(6), 856-873 (2004).

[12] Cohen R. Human Rights in North Korea: Addressing the Challenges. *International Journal of Korean Unification Studies,* 22(2), 29-62 (2013).

[13] Katherine HY. Protect the Unprotected: the Escaping North Korean Issues and China's Dual dilemma of Theoretical Enlightenment and Operational Trail. *The Pacific Review,* 32(4), 505-536 (2018).

[15] Jo SG. Terrorism Crisis on Northeast Asia. *International Journal of Crisis & Safety*, 5(1), 35-42 (2020). [Article]

[16] Jo SG. The United Nation's Response Strategy for North Korea's Denuclearization. *International Journal of Military Affairs,* 3(2), 20-80 (2018). [Article]

[17] Kai H. Explaining United States-China Relations: Neoclassical Realism and the Nexus of Threat-interest Perceptions. *The Pacific Review*, 30(2), 133-151 (2017).

[18] Ulferts G & Terry LH. North Korean Human Rights Abuses and Their Consequences. *North Korean Review*, 13(2), 84-92 (2020).

[19] Jed LH. A Framework for Avoiding Human Rights Security: North Korea and the Responsibility to Protect(R2P). *Malaysian Journal of International Relations*, 8, 234-235 (2020).

[20] Lee J. The UN's Human Security Challenge: The Plight of North Korean Refugees in China. *Journal of International Politics,* 25(1), 39-72 (2020).

[21] Creutz K. The Nexus Between Arms Control and Human Rights in the Case of North Korea: Implications for the Human Rights Agenda. *Journal of Autonomy and Security Studies,* 2(2), 70-96 (2018).

[22] Choi WS & Moon HC & Shin J. A Study on the Overcoming of the Asymmetry of the Korea-U.S. Alliance: Focusing on the Trump Administration's Security, Economic and Military Alliance Polices. *International Journal of Military Affairs*, 4(2), 1-9 (2019). [Article]

[23] Park JT. A Study on the Use of Military Forces in the North Korean Regime. *International Journal of Military Affairs*, 4(2), 18-24 (2019). [Article]

[24] Lee S. The Strategies of ROK's Defense Reform with Special Reference to the Peace Process and Arms Control. *International Journal of Military Affairs,* 5(2), 1-8 (2020). [Article]

[26] Han D. The Clash between Interest and Responsibility: China's Policy toward North Korean Escapees. *The Korean Journal of Defense Analysis*, 23(4), 443-455 (2011).

[27] Lee S. Universalism VS. Relativism: U.S. Human Rights Policies towards China and North Korea. *The Korean Journal of Security Affairs,* 13(1), 101-128 (2008).

[28] Lee S. The UN' Human Rights Policy towards North Korea: The Limit of the Neoliberal Approach. *The Journal of Peace Studies,* 13(2), 99-118 (2012).

5.2. Books

[2] Jack D. Universal Human Rights in Theory and Practice. Cornell University (2003).
[4] Fortman BG. Rights, Realities and Realization. Routledge (2011).
[6] Song J. Human Rights Discourse in North Korea: Post-colonial, Marxist, and Confucian Perspectives. Routlege (2011).
[9] Kawar L. Finding a Place for Marginal Migrants in the International Human Rights System. Emerld (2011).
[10] Heger BE. & Hollie N. Why the Underutilization of Child Rights in Global Mobilization? The Cases of Female Genital Cutting Practices and User Fees for Education. Human Rights: New Possibilities/ New Problems. Wagon Lane: Emerald (2011).
[11] Leila K. Finding a Place for Marginal Migrants in the International Human Rights System, Human Rights: New Possibilities/New Problems. Emerald (2011).
[14] Wellman C. The Moral Dimensions of Human Rights. Oxford University (2011).
[25] Mimi Z & Tom Z. Rethinking Human Rights in China: Towards a Receptor Framework. Routledge (2011).

6. Appendix

6.1. Authors contribution

	Initial name	Contribution
Author	SL	-Set of concepts ☑ -Design ☑ -Getting results ☑ -Analysis ☑ -Make a significant contribution to collection ☑ -Final approval of the paper ☑ -Corresponding ☑ -Play a decisive role in modification ☑ -Significant contributions to concepts, designs, practices, analysis and interpretation of data ☑ -Participants in Drafting and Revising Papers ☑ -Someone who can explain all aspects of the paper ☑

2021 6(1) 16-25
Submission: 2021/02/10, Peer review: 2021/02/20, Accepted: 2021/02/25, Published: 2021/03/30

International Journal of Human & Disaster

Publisher: J-INSTITUTE
ISSN: 2423-8260

Website: www.j-institute.jp/disaster/
Editor: disaster@j-institute.jp

Corresponding author
E-mail: danyabin@gmail.com

dx.doi.org/10.22471
/disaster.2021.6.1.16

Development of Program Model for Improving Intrapersonal Intelligence Based on FLIPPEDLEARNING

Joengbin Choi

Air Force Leadership Center, Cheongju, Republic of Korea

Abstract

Purpose: *Intrapersonal Intelligence is a fundamentally required competence for a human to do its part in a social environment and lead a life without regret. This Intrapersonal Intelligence is essential intelligence for all human beings, regardless of age. However, the recent fandom situation has weakened many people's mental strength due to increased emotional anxiety and depression. The variable "pandemic" had a great influence not only on one individual but also on society as a whole. The prolonged 'COVID-19' situation around the world has left modern people increasingly impoverished. Therefore, the time has come for Intrapersonal Intelligence more than ever. Therefore, this study developed a program model for the purpose of improving Intrapersonal intelligence.*

Method: *The educational model developed for the purpose of enhancing Intrapersonal intelligence was analyzed by literature based on previous studies to derive program components. In addition, for the convenience of learners in the digital age, it is designed based on Flipped Learning, which enables continuous learning and has high timeliness. In order to improve the completeness of the program, a procedure for verifying reliability and validity was carried out by review of seven doctors in educational engineering and instructional design experts.*

Results: *The main factors that constitute the contents of the Intrapersonal intelligence improvement program consisted of 'self-understanding, self-regulation, and self-design'. The detailed elements for each factor are 'understanding self-emotional and comprehension of ability', 'future design and achievement motivation', and 'mutual regulation and impulse control'. In addition, the Intrapersonal intelligence improvement program based on Flipped Learning was designed to fully understand the prerequisite learning materials through the pre-learning materials and to conduct discussion and coaching at the same time in the in-class.*

Conclusion: *This study follows the same context as prior research that demonstrates that existing Intrapersonal intelligence can be improved through learning. However, this study utilizes open educational resources as a medium for prior learning in a methodical approach to teaching and learning, and in-class mainly uses coaching and discussion, which are non-directive teaching methods. As a result, I hope that through the Intrapersonal intelligence improvement program, modern people can recognize themselves right away, control their emotions, design a positive future, and lead a happy life.*

[Keywords] ***Intrapersonal Intelligence, Flipped Learning, NLP Coaching, Program Design, Instruction Model***

1. Introduction

Our society, which has been transformed by the 'COVID-19' pandemic in recent years, faces many unexpected difficulties in all aspects[1]. In particular, the COVID-19 outbreak has adversely affected human life in general, including society, politics, military, economy, culture, and education[2][3][4]. As the pandemic is prolonged, human emotions have become more impoverished, and sociality is lacking as contacts between people become distant. In addition, the self-consciousness of objectifying oneself is also lowering. Our society, viewed as a background of this era, requires strong mental strength along with the establishment of individual identity. In other words, a new level of intelligence is needed to understand yourself correctly, control your emotions, and set yourself right in the desirable direction. This capability can be represented by 'Intrapersonal Intelligence'. Intrapersonal Intelligence is the ability to understand one's own emotions and use them freely. In other words, it refers to the perception of one's abilities and the ability to control and develop them. It also includes awareness of one's future and the ability to control and prepare for the future.

Intrapersonal intelligence is an important factor that activates all intelligence-related abilities, and is the intelligence that represents all reflections on "who I am"[5]. Intrapersonal intelligence is a fundamental requirement for a human being to do its part in a social environment and lead a life without regret. This Intrapersonal intelligence is absolutely necessary in shaping a realistic self-concept and planning a better life experience in a chaotic society like the Pandemic Era. Therefore, the development of a program to improve intrapersonal intelligence in the present age is essential.

In order to improve intrapersonal intelligence, it is necessary to differentiate and implement educational content and methods above all else. Among them, the first part to be considered is the division of the intrapersonal intelligence area that constitutes the educational content and the process of deriving each sub-element. In other words, it is necessary to systematize educational elements in order to achieve the educational goals.

On the other hand, in the aspect of operating self-reflection programs, efforts are needed to apply a new teaching and learning structure in accordance with the changing educational environment and learner demand tendency[6]. In order to achieve the educational goals within a limited time, basic knowledge must be completed through prior learning. Next, in face-to-face education, the structure of teaching and learning should be systematically designed so that learners can be centered and fully experience practical training. In particular, the practice method should be coaching or discussion, which is a non-directive teaching method[7]. This teaching-learning system can be implemented in flipped learning.

As mentioned above, the research questions set up to achieve the purpose of this paper are as follows.

First, what are the components of the flipped learning-based intrapersonal intelligence enhancement program?

Second, how is the teaching-learning model of an intrapersonal intelligence improvement program based on flipped learning constructed?

2. Intrapersonal Intelligence Enhancement Program Design

2.1. Components of intrapersonal intelligence

The 21st century is an era of emphasis on creativity should continue to develop human capabilities. In the past, human abilities were represented by intelligence quotient(IQ). However, the intelligence index measured intelligence only in the language domain, logical math domain, and spatial domain. However, it is unreasonable to limit the intellectual domain of humans living in the modern complex world to three. In such a background, a new concept of intelligence was created while criticizing the existing intelligence index. It was called as multiple intelligences, this concept has been applied widely, ranging from early childhood to adult education[8]. Multiple theory is divided into eight areas. The eight are divided into linguistic intelligence, logical-mathematical intelligence, musical intelligence, spatial intelligence, physical intelligence, natural intelligence, interpersonal intelligence, and intrapersonal intelligence[9]. Among them, Intrapersonal Intelligence is literally intelligence based on how well you know yourself and can reflect and reflect on yourself.

To be more specific, Intrapersonal intelligence is' the ability to distinguish between feelings of pain and pleasure and to be alienated from the environment or to intervene further based on the distinction. And in a more advanced form, it is 'the ability to identify and symbolize complex and highly differentiated emotions'. Intrapersonal Intelligence can also be described as 'the ability to intervene in one's emotions or moods, analyze and classify these emotions, and then name each of them to understand and modify one's behavior'[10]. In addition, self-reflection was defined as 'consciously and closely considering what happened to oneself and events occurring in life'[11].

In reality, humans cannot live by thinking and acting selfishly within the framework of society, so they must cooperate with others and live in harmony. That's why I need to have the ability to properly understand my traits and basic dispositions, control my emotions, and reflect on my own. In the end, since humans must understand and control themselves and develop their ability to live with others, the interest and importance of self-reflection intelligence has increased. In addition, self-reflection intelligence is recognized as the most important factor that activates all intelligence-related abilities. Then let's find out what the Intrapersonal intelligence consists of.

In order to improve intrapersonal intelligence, it is necessary to differentiate the teaching content and methods of intrapersonal intelligence above all else. Among them, the first thing to consider is the process of subdividing the core areas and sub-elements that make up the educational content.

So, in order to confirm the constituent factors of concrete self-reflection intelligence, the factors that appeared in previous research papers were analyzed[12][13][14][15][16][17][18]. As a result, factors discussed by several researchers were confirmed, and the results are shown in <Table 1> below.

Table 1. The components of intrapersonal intelligence derived from literature research.

Components / Researcher	Emotional awareness	Ability recognition	Emotional control	Emotional utilization	Goal settings	Behavior control	Achievement orientation	Ownership awareness	Metacognition	Self efficacy	Decision making	Problem solving	Value and belief	Self reflection
Gardner(1999)[9].	•	•	•	•	•									
Kim YB(2000)[13].	•	•	•	•	•				•			•		
Jeong JJ(2001)[14].	•	•		•	•				•	•	•		•	
Anthoy & Frankli (2002)[15].	•					•			•					•
Shearer(2002)[16].	•		•		•	•			•				•	
Moon YR(2004)[12].	•	•	•	•	•									
Kim JH(2005)[11].	•	•	•	•	•						•			
Kwon OJ(2008)[17].	•	•	•	•	•	•	•							
Baek JN(2011)[18].		•	•					•		•				
Component agreement(%)	88.9	77.8	77.8	66.7	77.8	33.3	11.1	11.1	44.4	22.2	22.2	11.1	22.2	11.1

In the research related to intrapersonal intelligence, 14 components were identified. Each item is 'Emotional awareness, ability recognition, emotion control(impulse control), emotion utilization, goal setting, behavior control(situation judgment), achievement orientation, ownership awareness, metacognition, self-efficacy, decision making, problem solving, values And beliefs, self-reflection'.

Looking at the internal agreement of the constituents of each study, the constituents of 50% or more were emotional awareness(88.9%), ability Recognition(77.8%), emotional control(77.8%), emotional utilization(66.7%), and goal setting(77.8%). As a result, when investigating the factors that researchers about intrapersonal intelligence considered to be important, it is judged that 'emotional awareness, ability recognition, emotional control, emotional utilization, goal setting', etc. are necessary factors for improving intrapersonal intelligence. However, there is a limit to constructing an intrapersonal intelligence improvement program with only five factors. Therefore, it is necessary to additionally work on "chunking up class components" to organize the educational content while accepting all the five factors mentioned above.

According to an additional previous study, Kwon OJ(2008) presented the areas mentioned as major constituents of Moon YR's intrapersonal intelligence as a new aspect. In the research of intrapersonal intelligence, Moon YR(2004) classified the sub-elements into 'sensibility perception, ability perception, and future plan'. Accordingly, Kwon OJ paid attention to the report that the perception of sensitivity and ability had a very close correlation in Kelly(1995)[19]'s study on self-understanding. As a result, the perception of sensitivity and ability was selected as 'self-awareness'. In addition, in terms of content, the factors of sensibility recognition and ability recognition include both recognition and control, and were integrated into 'understanding' rather than the term 'recognition' and set as the 'self-awareness' domain. In addition, self-regulation skills discussed in terms of function in all areas of Intrapersonal intelligence is literally 'self-control' was selected as one of the factors. Self-control is the most important factor in human life and must be developed, and it can be said to be an important ability for human self-realization. Finally, the future design area was 'self-design' for goal setting, which was selected for the ability to design and motivate the future. When reorganizing the factors of the program above, it is decided as 'self-understanding, self-control, self-design. The component results for Intrapersonal intelligence on the basis of these discussed in prior studies are shown in <Table 2> below.

Table 2. The components of intrapersonal intelligence.

Components	Definition	Sub factors	Definition
Self-understanding	The ability to awareness of self-emotions and ability to utilize emotions	Self-emotional understanding	The ability to understand and use one's emotions
		Understanding ability	The ability to recognize one's own abilities
Self-design	The ability to set your own goals and synchronize to achieve them	Future design	The ability to plan your own goals
		Motivation for achievement	Motivational ability to achieve goals
Self-control	The ability to control emotion and behavior according to situational judgment	Situation control	Judgment ability to control behavior according to the situation
		Impulse control	Impulse control ability to regulate emotions and behavior

2.2. Teaching and learning system for intrapersonal intelligence enhancement program

In order to effectively and efficiently operate the intrapersonal intelligence improvement program, it must be designed with a systematic teaching and learning structure. It is effective to deliver knowledge about self-reflection in advance to learners who prefer to use digital in recent years, and to operate various exercises centered on learners in face-to-face education. The above teaching-learning structure can be designed as Flipped Learning as a learning structure that combines on-line and off-line.

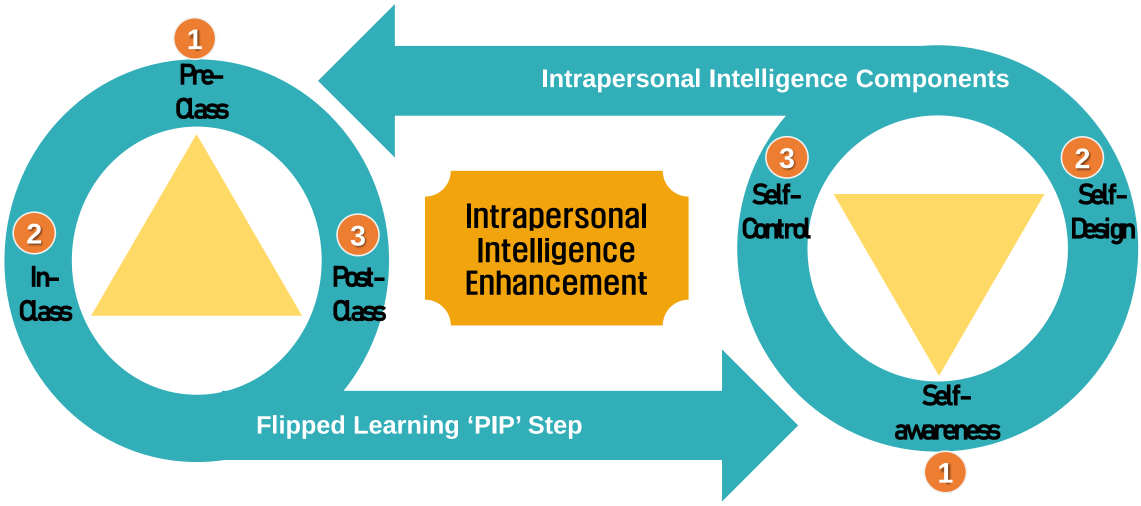
Flipped Learning is a teaching-learning method in which a learner acquires knowledge or information before class, through self-directed learning, and in face-to-face class, fosters personality and creativity through instructor coaching and active learning among peer learners[6].

Traditional teaching methods consisted of instructors giving lectures in class, and learners learning through assignments individually or in teams after the class is over. Such education is ineffective in lowering the motivation for learning and improving academic performance.

In flipped learning, on the other hand, learners self-directedly prepare for e-learning contents provided by other educational institutions, such as lecture videos created by instructors or OER(Open Education Resource). And in the in-class, students learn through discussion or coaching for practical problem solving based on prior knowledge. Therefore, the flipped learning structure of instruction generally improves learning outcomes[20].

However, flipped learning has a caveat. As teaching methods change, the role of instructors must change. Instructors should move away from knowledge transfer and play the role of facilitators who can provide discovery learning and motivation through questions when students face difficulties. In other words, rather than giving lectures, we should turn to coaching, a non-directive teaching method. In the end, instructors must act as coaches to help students fuse knowledge and create new ideas through Flipped Learning.

Figure 1. Intrapersonal intelligence enhancement program flowchart.



In general, flipped learning is divided into pre-class, in-class, and post-class. Through these PIP steps, you will learn and learn "self-understanding, self-regulation, and self-design", which are the key elements of intrapersonal intelligence. As a result, the effectiveness of the program will increase as the Flipped Learning teaching method and Intrapersonal intelligence instructional elements are organically combined.

In addition, in order to improve intrapersonal intelligence, various educational methods must be applied. The ultimate goal of self-reflection is to create more realistic outcomes by setting up problems for yourself and exploring opportunities. That's why coaching that helps you solve your problems on your own is very effective. Recently, a method of combining emotional coaching and integrated art therapy has been introduced, proving the effectiveness of education[7].

In addition, you can objectify yourself through discussions with fellow learners. As an additional method, various psychological tools can be used. In addition, through meditation or role-playing, you can gain a variety of learning experiences to help increase your intrapersonal intelligence.

3. Development of An Intrapersonal Intelligence Enhancement Program Model

3.1. Intrapersonal intelligence enhancement program model validation

The results of the constituent factors that will constitute the content of the intrapersonal intelligence improvement program were devised based on previous studies. Each detailed factor was derived as 6 factors in 3 areas, and based on them, an educational model for the Intrapersonal intelligence program was devised. And The design principle of this program was designed by reflecting the characteristics of Flipped Learning in terms of educational content, educational method, and educational experience provision. In the process of confirming the model, a questionnaire for experts was produced to secure the validity, and the validity was verified by 7 educational engineering experts. The expert group consisted of 4 instructional design experts and 3 educational method experts. Also, as a Ph.D. degree holder in the field of education, he has over 20 years of educational experience and was selected as a university professor. In the validation process, an explanation of the model was presented, and as the validity test items, the contents of the model's validity, explanatory power, usefulness, universality, and understanding were configured to be rated on a Likert 5-point scale. Content validity ratio(CVR) was calculated to verify content validity. The feasibility questionnaire was delivered and collected by e-mail, and the results of the feasibility verification of the expert group are shown in <Table 3> below.

Table 3. Intrapersonal intelligence program model validity verification.

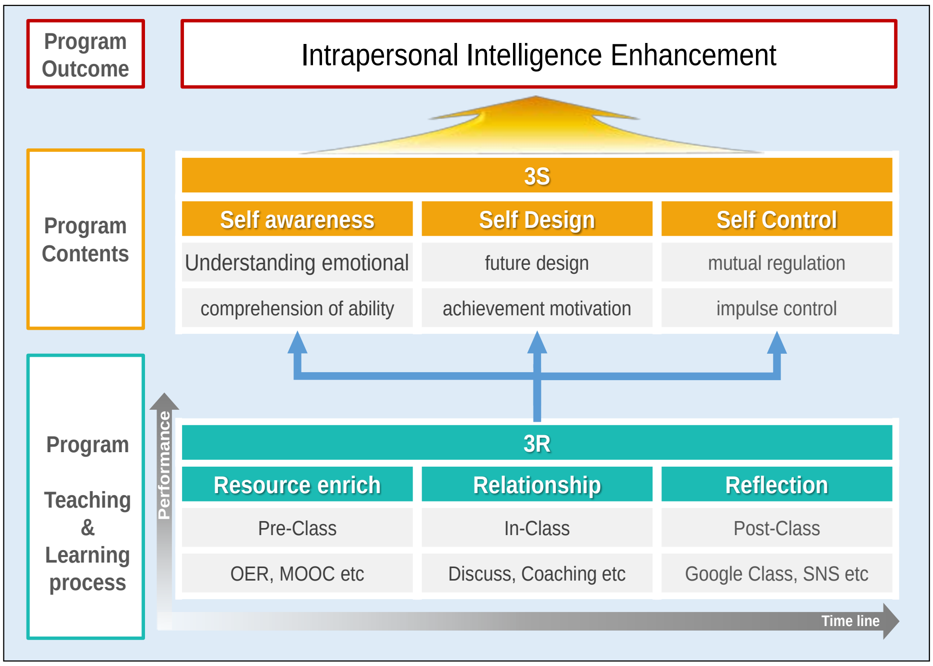
Components	Question	M	SD	CVR
Validity	This model is a well-presented model of appropriate educational activities step by step based on Intrapersonal Intelligence components.	4.57	0.49	1.00
Explanation	This model illustrates the proper factors and procedures for developing Intrapersonal Intelligence.	4.14	0.40	1.00
Usefulness	This model can be used significantly in training sites for the purpose of developing Intrapersonal Intelligence.	4.57	0.49	1.00
Universality	This model can be flexibly applied to a variety of subjects that want to apply Intrapersonal Intelligence.	4.43	0.49	1.00
Comprehension	This model is easy to understand as the whole process is structured for the development of intrapersonal intelligence.	4.57	0.49	1.00

The above score results show that the average value of validity for each evaluation item is within the range of 4.14~4.57, indicating that all elements of the model are properly recognized. The information calculated for each evaluation element also look at the ratio(CVR) it can be seen that the distribution in the range of 1.00. According to Lawshe(1975), when the number of N cases is 7, the minimum CVR value for securing content validity at the significance level of 0.05 is 0.99[21]. Therefore, content validity was secured for the model developed in this study.

3.2. Intrapersonal intelligence improvement program final model

The final model supplemented by the validation of the intrapersonal intelligence improvement program is as follows.

Figure 2. Intrapersonal intelligence 3R-3S model.



Intrapersonal intelligence enhancement teaching and learning model based on flipped learning is largely composed of two steps. Basically, the program is developed through the steps of Pre-Class, In-Class, and Post-Class in the Flipped Learning teaching and learning structure. This step can be expressed as '3R'.

First of all, when explaining each step, the Pre-Class should utilize the resources of various classes. Any open educational resource, such as OER(Open Education Resource), can be used. Representatively, MOOC, Youtube, and lecture videos by instructors are provided. Pre-learning is better the more diverse materials are provided. This is because learners' basic knowledge is enriched through prior learning. For that reason, Pre-Class is expressed as 'Resource enrich'.

Second, in the In-Class, learners participate in the class in order to recognize and solve their own problems based on the resources in the Pre-Class. Teaching methods include coaching, discussion, role play, and other collaborative learning. Humans may suffer from personal problems, but they need the help of others to solve those problems. Therefore, if non-directive pedagogy is widely used as a cooperative learning structure, the educational effect will increase. For that reason, In-Class represents a 'Relationship'.

Third, Post-Class is operated for the purpose of continuing the interaction between professors and learners, and the education management system is useful. You can use social media such as Google Class and Blog, which are widely used in general. Post-Class is a process in which learners receive education and learn the contents of their own change and growth afterwards, and 'Reflection' can be said to be the main learning activity.

Next, I will explain the content elements for operating an interpersonal intelligence program.

Program Contents can be expressed as '3S' and categorized as 'self-Awareness, self-Design, and self-Control'.

Self-understanding is the ability to take advantage of the awareness and emotional about his emotions and abilities. Its sub-factors are composed of self-emotional understanding and ability understanding. Next, self-regulation refers to the ability to control emotions and behaviors according to situational judgment. This constituted a factor with situational control and impulse control. Finally, self-design refers to the ability to set one's own goals and to synchronize to achieve them. This was composed of detailed factors of future design and achievement motivation.

As a result, we developed an intrapersonal intelligence improvement education model based on flipped learning, combining all the processes and components for improving intrapersonal intelligence. And this program model will be called 'Intrapersonal Intelligence 3R-3S'.

4. Conclusion

Recently, the situation in our society has been extremely deteriorating due to the influence of the pandemic. At this time, all of us must overcome difficulties with a positive mindset without losing our identity. This requires self-understanding, self-regulation, and the ability to plan constructively. Such capabilities are realized when increasing intrapersonal intelligence. Therefore, in this study, in order to improve intrapersonal intelligence, a flipped learning-based curriculum was systematized and an educational model was developed in the process.

The conclusions based on the results of this study's research problems are as follows. First, the 'Intrapersonal intelligence improvement program' developed in this study derived elements of training content through literature analysis studies. The content elements of intelligence education within individuals of the program devised in this study reflected the analysis results of previous studies. The results were selected as 'self-awareness, self-design, self-control'. And, as each sub-factor, it consisted of 'self-emotional understanding and ability understanding', 'the ability to control emotions and behaviors according to situational judgment', and 'future design and motivation for achievement'.

Second, it was judged that in order to improve intrapersonal intelligence, a learner-centered education method was needed rather than a general lecture-style learning format. For that reason, as a result of considering the characteristics of 21st-century learners, efforts to update the educational environment and educational methods were needed in relation to motivational aspects and learning commitment. Therefore, In this paper, we apply the structure of Flip Learning and devise Active Learning to maximize the learner's constant learning and peer learning. As a result, the components that make up the program and the process of drafting a Flipped Learning-based teaching learning model are based on expert reviews.

Finally, the limitations of this study result and suggestions for follow-up studies are as follows.

First, this study developed an educational model for improving intrapersonal intelligence, and did not measure the educational effect. Therefore, the “Intrapersonal Intelligence 3R-3S” model designed in this study should be applied to actual education sites to prove its effectiveness. In addition, detailed instructional and learning guidance for each session should be developed for the intrapersonal intelligence improvement program to be operated. These studies are left as research tasks, and we hope to demonstrate the effectiveness of the intrapersonal intelligence improvement education model through further experimental research. In addition, learner groups should be organized in various ways to analyze differences for each object. And based on the results, the educational content appropriate to the learner's characteristics should be supplemented.

Second, in this study, to provide learners' convenience, an education model was presented as a structure that provides pre-learning and connects education afterwards. However, in order to systematically operate such pre-learning and post-learning, a flexible learning management system LMS(Learning Management System) is required. If you cannot use an official LMS, you can use Google or SNS, but considering the effectiveness and efficiency of education, it is recommended to use a flexible and professional LMS.

5. References

5.1. Journal articles

[1] Choi SO. New Normal Corona Crisis Management Governance. *Journal of Governance Studies*, 15(3), 1-26 (2002).
[2] Kim DW. Government Roles in Policy Networks against Covid-19: Comparing Two Cases in S. Korea. *Protection Convergence*, 5(2), 14-26 (2020). [Article]
[3] Cho HJ & Park SJ & Im YS. Human Security Task and Prospect on Covid-19 Pandemic. *International Journal of Terrorism & National Security*, 5(2), 48-55 (2002). [Article]
[4] Park GY & Kim HS & Li Y. Virtue for Post Covid-19 and AI Technology. *Robotics & AI Ethics*, 5(2), 8-18 (2020). [Article]
[6] Choi JB. Instructor Competency for Innovative Teaching Methods in the Untact Era. *Robotics & AI Ethics*, 5(2), 50-56 (2020). [Article]
[7] Lim YJ. Implications of Emotional Coaching and Integrated Art Therapy Teaching Method on Leadership Education in the AI Era. *Robotics & AI Ethics*, 5(2), 42-49 (2020). [Article]
[14] Jeong JJ. A Study on the Measurement of Multiple Intelligence. *Journal of Elementary Education*, 17(1), 161-198 (2001).
[15] Anthony & Frankli. The Self-reflection and Insight Scale: A New Measure of Private Self-consciousness. *Social Behavior and Personality An International Journal*, 30(8), 821-835 (2002).
[20] Choi JB & Kim EK. Developing a Teaching-learning Model for Flipped Learning for Institutes of Technology and a Case of Operation of a Subject. *Journal of Engineering Education Research*, 18(2), 77-88 (2014).
[21] Lawshe CH. A Quantitative Approach to Content Validity. *Personnel Psychology*, 28, 563-575 (1975).

5.2. Thesis degree

[10] Kim MG. A Study of A Teaching Method for the Integrated Art Appreciation Drawing on Howard Gardner's Theory of Multiple Intelligence. Hanyang University, Master's Thesis (2003).
[11] Kim JH. A Study on the Development of a Career Education Program Based on Multiple Intelligences Theory. Seoul National University, Doctoral Thesis (2005).
[17] Kwon OJ. The Development of Intrapersonal Intelligence Assessment Scale and Enhancement Program for Elementary Students. Chungnam National University, Doctoral Thesis (2008).
[18] Baek JN. Validation of Multiple Intelligence Measurement Questions for Students with Developmental Disabilities. Kongju National University, Doctoral Thesis (2011).

5.3. Books

[5] Gardner H. Frames of Mind: The Theory of Multiple Intelligence. Basic Books (1983).
[8] Gardner H. Multiple Intelligences: The Theory in Practice. Basic Books (1993).
[9] Gardner H. Intelligence Reframed: Multiple Intelligences for the 21st Century. Basic Books (1999).
[12] Moon YR. Intellectual Revolution. Business Books (2004).
[13] Kim YB. Multi-intelligence Development Scale. Korean Educational Development Institute (2000).
[19] Kelly L. Challenging Minds: Thinking Skills and Enrichment Activities. Zephyr (1995).

5.4. Additional references

[16] Shearer & C. Branton. Using a Multiple Intelligences Assessment To Facilitate Teacher Development. Institute of Education Sciences (2002).

6. Appendix

6.1. Authors contribution

	Initial name	Contribution
Author	JC	-Set of concepts ☑ -Design ☑ -Getting results ☑ -Analysis ☑ -Make a significant contribution to collection ☑ -Final approval of the paper ☑ -Corresponding ☑ -Play a decisive role in modification ☑ -Significant contributions to concepts, designs, practices, analysis and interpretation of data ☑ -Participants in Drafting and Revising Papers ☑ -Someone who can explain all aspects of the paper ☑

2021 6(1) 26-35
Submission: 2021/02/10, Peer review: 2021/02/20, Accepted: 2021/02/25, Published: 2021/03/30

International Journal of Human & Disaster

Publisher: J-INSTITUTE
ISSN: 2423-8260

Website: www.j-institute.jp/disaster/
Editor: disaster@j-institute.jp

Corresponding author
E-mail: bijou0501@naver.com

dx.doi.org/10.22471
/disaster.2021.6.1.26

The Relationship Between Self-Esteem and Gratitude Tendency of University Students during the Corona-19 Era of HUMAN DISASTER

Jeumnam Kim[1]
Howun University, Gunsan, Republic of Korea
Yeojin Lim[2*]
Navy Leadership Center, Changwon,, Republic of Korea

Abstract

Purpose: *This study analyzes the relationship between self-esteem and gratitude tendency of university students during the corona 19 era of human disaster. From the end of 2019, TV programs, radio, and social media platforms have covered the novel corona virus infection(Corona 19) as the most important article. The stress caused by the COVID-19 epidemic showed a significant negative correlation with the quality of life, and positive psychological capital had a significant modulating effect, so it was necessary to develop a program to mediate the lowered quality of life. So at this moment, university students in their twenties living with the task of self-formation suggest that they have a high probability of developing depression through the loss of meaningful objects and distortion of their self-experience. Since gratitude has a positive correlation with psychological well-being and negative emotions such as anxiety, depression, and jealousy, it has a great influence on university student's daily life.*

Method: *In this study, the following hypothesis was established to find out what differences are there between gratitude tendency according to the characteristics of university students(gender, grade, religion), and also to examine the relationship between the self-esteem and gratitude tendency of university students. H1: Depending on the characteristics of university students, there will be a significant difference between gratitude tendency. H2: University students' self-esteem will have a significant correlation with gratitude tendency. To measure self-esteem among the main variables of this study, the self-esteem item developed by Korean scholars was used based on the self-esteem scale developed by Rosenberg(1965).*

Results: *Difference analysis(t-test and ANOVA) was conducted to find out the difference between the gratitude tendency(Hypothesis 1) according to the characteristics of university students, and the characteristics of university students generally include gender, grade, and religion. The difference between gratitude tendency was significant only in gender and religion actually. As a result of the analysis, in terms of gender, female students showed a relatively high gratitude tendency, and in religion or not, students with religion showed higher gratitude tendency. As a result of conducting a correlation analysis on the self-esteem and gratitude tendency of university students(Hypothesis 2), significant correlations were found for both self-esteem factors. As a result of the analysis, positive self-esteem shows a positive(+) correlation with gratitude tendency, and negative self-esteem shows a negative(-) correlation with gratitude tendency.*

Conclusion: *This study will be able to suggest a basic plan to ensure that university students can spend their time smoothly without psychological wandering and departure due to the limitations of daily life caused by corona virus infection(corona 19) during career decision period.*

[Keywords] ***Covid-19, Self-Esteem, Gratitude Tendency, University Students' Characteristics, Thanks Sharing***

1. Introduction

From the end of 2019, TV programs, radio, and social media platforms have covered the novel corona virus infection(Corona 19) as the most important article. If we continue to be exposed to reports and information on the number of deaths and outbreaks by country and abroad, our mental health will be immediately affected. Anxiety also intensifies. People's social life is limited, and they complained of depression, anxiety, and stress due to social isolation, and the government is operating the National Trauma Center to manage the stress of the people caused by this situation[1][2][3].

The stress caused by the COVID-19 epidemic showed a significant negative correlation with the quality of life, and positive psychological capital had a significant modulating effect, so it was necessary to develop a program to mediate the lowered quality of life. Recognizing that positive psychological capital is a powerful psychological competency that affects individual behavior and satisfaction, systematic management was proposed[2][3]. According to a survey on the national mental health due to Corona 19, people in their 20s who experience anxiety and depression due to Corona 19 are disturbed by 75.9% in their daily life, and the need for psychological support services is middle-aged(40 And 50's) showed 51.8, higher than 46.3% and 47.5%[3][4][5].

University students in their twenties living with the task of self-formation suggest that they have a high probability of developing depression through the loss of meaningful objects and distortion of their self-experience. He said that he had negative self-confidence as he considered various tasks as uncontrollable events or fears[5][6].

Therefore, it is necessary to study the factors influencing university students' stress reduction and happy university life[6]. Because the tendency to be grateful makes coping differently in stressful or social situations, It is pointed out that it is beneficial to health and it is a reason for promoting well-being: those with a strong gratitude tendency are more proactive, tend to reinterpret the situation positively, and also use social support more.

University students with high self-esteem think that all of their lives are valuable and rewarding, and act with confidence. As a result, they lead an amicable social life and live a progressive and energetic life. On the other hand, a university students with low self-esteem is abusing theirselves because they can consider theirselves useless, worthless, and bad[4][7][8]. Since gratitude tendency has a positive correlation with psychological well-being and negative emotions such as anxiety, depression, and jealousy, it has a great influence on their's daily life[9][10][11].

It was found that there was no difference in the gratitude tendency of koreans according to religion. Particularly noteworthy is that among those who have religion, those who have a stronger religious spirit have a higher tendency to appreciate than those who do not. Religious people express their gratitude for their spiritual beings when they pray, which is interpreted as the stronger the religious spirit, the more frequent the prayer of thanksgiving, and the more frequent and stronger feelings of gratitude.

The World Health Organization(WHO) has a new corona virus infection(Corona 19) is a pandemic. It is predicted that it could go beyond(pandemic, a global pandemic) and become endemic[5]. Therefore, it would like to present a plan that allows students to spend their time in university students smoothly without psychological wandering and departure due to the limitations of daily life due to corona virus infection(Corona 19) in university life, which is the time of career decision in life. Until now, most of studies have been conducted on the gratitude tendency in general situations, mainly centering on adolescents, adults, and nursing university students.

However, in the context of non-face-to-face classes due to Corona 19, it is necessary to study the relationship between the cause of gratitude tendency differs for each individual(gender, grade level) and cultural factors such as religion with gratitude tendency for university students.

Therefore, in this study, the relationship between self-esteem and gratitude tendency of university students is investigated, and how these factors differ according to the characteristics of university students.

2. Theoretical Background

2.1. Corona-19

Corona virus disease 2019(COVID-19) is a type of pneumonia-causing virus that occurred in Wuhan, China's Hubei province, in December 2019[3]. Corona viruses are a group of related viruses that cause diseases in mammals and birds. In humans, corona viruses cause respiratory tract infections that can be mild, such as some cases of the common cold(among other possible causes, predominantly rhino viruses), and others that can be lethal, such as SARS, MERS, and COVID-19.

Here, COVID-19 stands for that "CO" refers to 2019 when the outbreak of the new corona virus was first reported, "VI" means virus, "Disease" and "19." In response, the South Korean government announced on February 12 that it would name the Korean name for the "new corona virus infection" as "Corona virus infection-19," or "Corona 19."[2][5].

Recently, Corona 19 is confusing Korean society. As people have to avoid many places, the activity of the people has been greatly reduced. The change in life patterns, which can cause a lot of changes in human psychology[2][5][6].

The bigger problem is that the increase in anxiety and depression that individuals feel is also transmitted to others; this is also called “emotional transmission” in psychology. Individual negative emotions are easily communicated to others, and in fact, we make these experiences easier in our daily lives, like the experience of hearing a friend's depressing story and feeling depressed as well. Interestingly, the transmission of negative emotions occurs more easily and quickly than the transmission of positive emotions[10].

Why does this transmission occur? We don't necessarily learn from experience alone. Since real experience involves considerable risk, the human cognitive system is designed to mimic other people's emotions and experiences in the brain and learn by proxy. In other words, our cognitive system is designed to learn the other person's experience instead of 'observation'. Changes in life patterns due to corona situations, the contagion of the bottom of the heart may also lead to experiences that reduce self-esteem[10].

2.2. Self-esteem

Self-esteem refers to the heart of believing that they are valuable beings who deserve to be loved, and that they are capable of accomplishing certain achievements, and those who love and value themselves are highly self-esteemed[13]. It also means accepting oneself positively and recognizing it as a valuable human being, reflecting a personal evaluation of one's own values, and is a useful psychological resource in responding to the needs of life[11][12][13].

Self-esteem can be defined as the totality of how much you respect and value oneself. Depending on self-esteem, life can be positive or negative. Intuitively, a person with high self-esteem may see their life positively, but a person with low self-esteem may not. This reasoning can be verified without difficulty in a study on self-esteem and happiness[13].

Because people with low self-esteem evaluate themselves lowly or negatively, they have negative emotions such as inferiority or depression, resulting in dissatisfaction with desire and a passive attitude to life. On the other hand, people with high self-esteem have high satisfaction with life and a high sense of happiness because they are stable[14]. The importance of self-esteem is an important motive for human behavior, and is closely related to psycho social adaptation[12][13][14].

In addition, self-esteem can increase when we feel that we are a valuable and meaningful being, or when we feel that we are living a desirable life that can be a standard in the values of our culture[15]. Therefore, positive self-esteem can be said to be a very important psychological factor in university students in forming correct values[13]. Self-esteem can be said to be an inner force that leads an individual's life to the extent that they judge themselves as valuable people. In general, self-esteem is mentioned as an important predictor for university life and adjustment, and it is reported that the higher the self-esteem, the higher the adaptability and the more positive evaluation of oneself, and smoothly adapts to personal problems at home and society[14][15].

2.3. Gratitude tendency

People with higher gratitude tendency experienced less negative emotions such as depression, anxiety, loneliness, etc., and were less inclined to respond emotionally and sensitively. They had more positive traits such as extroversion, sincerity, and optimism, and were satisfied with life. And the feeling of well-being was also high[16][17]. McCullough & Emmons & Tsang(2002) argue that gratitude tendency is a 'moral sentiment' that is motivated to perform and maintain pro-social and moral behaviors when recognizing that one has been treated pro-social, and to avoid destructive interpersonal behaviors. It was defined as a state. Gratitude experience is a positive sentiment that believes that the benefits you have received belong to others[16][17][18].

Experiences and expressions of gratitude have transcended culture and time and have been treated as desirable aspects that are fundamental to human character and social life[16][17][18]. This is because the experience of gratitude is highly related to positive emotions, happiness, satisfaction in life, and satisfaction in social relationships[16][17][19][20][21].

In a study of undergraduate and graduate students, it was found that gratitude tendency has a positive correlation between psychological well-being and positive emotions[22][23]. This can affect how gratitude disposition helps resolve maladapted emotions and maintains or increases psychological well-being. Psychological well-being is not a subjective dimension of an individual, but an evaluation and measurement of functional things in social relationships and roles with others[18][19][20][23].

Overall, women have a higher gratitude tendency than men. Women have a higher tendency to appreciate than men because women feel more densely and easily feel more comfortable emotional expression than men, and have a stronger emotional depth[24][25].

On the other hand, in Korea, Kwon Seon-jung et al.(2006), who used GQ-6 to measure appreciation propensity, said that there was no difference in the level of appreciation propensity for men and women, and there was no gender difference in the Park So-jung study of high school students. However, using the gratitude test chart developed by Lim Kyung-hee, it was said that female children had higher gratitude tendency than boys[26][27][28].

Religion is frequently mentioned among the variables that affect gratitude tendency. In the study of the relationship between religiousness and gratitude in the United States, gratitude tendency is interrelated. There are more opportunities to express gratitude. Also most christian prayers contain expressions of gratitude. On the other hand, it was found that there is no difference between the presence or absence of religion in the gratitude tendency of Koreans. Among those who have a religion, the stronger the religious spirit, the more frequent the prayer of thanksgiving, and it is said that they have a higher tendency to give thanks than those who have not religion.

In many studies, it related to gratitude report that gratitude is related to happiness, hope, pride, optimism, positive mood, self-realization, smooth interpersonal relationships, community consciousness, life satisfaction, pro-social behavior, anger control, and psychological well-being[24][27][28][29].

3. Research Design

3.1. Research hypothesis

In this study, the following hypothesis was established to find out what differences are there between gratitude tendency according to the characteristics of university students(gender, grade, religion), and also to examine the relationship between the self-esteem and gratitude tendency of university students.

H1: Depending on the characteristics of university students, there will be a significant difference between gratitude tendency.

H2: University students' self-esteem will have a significant correlation with gratitude tendency.

3.2. Manipulating definition and survey design of variables

To measure self-esteem among the main variables of this study, the self-esteem item developed by many Korean scholars was used based on the self-esteem scale developed by Rosenberg (1965)[30]. Self-esteem consists of a total of 10 questions of 5 questions each, with positive and negative self-esteem, and each question is on a 5-point scale from not at all(1 point) to very much(5 points). And to measure gratitude tendency, the Korean version of the gratitude questionnaire-6(GQ-6) developed by McCullough et al.(2002) and converted by Kwon et al[16][18][27]. Seonjoong Kwon et al.(2006) to increase the validity was used. 4 questions, 2 reverse questions[26][31][32].

And also I make correction during the question. Five questions were also measured on the Likert 5-point scale by supplementing as grateful and appreciating persons combined.

The sample of this study was conducted with 105 students from H University, and the questionnaire composition was largely composed of the main variables of university students, such as self-esteem, gratitude tendency, and university student characteristics(gender, grade, major, religion). The SPSS statistical package was used for statistical processing of the collected data, frequency analysis was performed to identify the characteristics of university students, factor analysis and reliability analysis to verify the validity and reliability of major variables, and difference analysis(t-test, ANOVA), correlation analysis was performed.

4. Empirical Analysis

4.1. General characteristics of sample

To analyze the characteristics of university students, the results of calculating the frequency and percentage are shown in <Table 1>. For students taking major and liberal arts classes, gender is 62 female(59.0%), male student 43(41.0%), first grade 53(50.4%), second grade 13(12.4%), and third grade. There are 17 students(16.2%) and 22 students(21.0%) in fourth grade. 41(39.0%) answered that they had religion or not, and their major was air tourism, 55(52.3%), and nursing in the health department. Dental hygiene. There were 30 emergency rescuers(28.6%), mechanical vehicle engineering 9(8.6%), defense weapon system 6(5.7%), and computer games 5(4.8%). The most common reason for applying to majors was 46(43.8%), followed by job security 33(31.4%), and 18(17.1%) recommended by parents and neighbor.

Table 1. Sample characteristics.

Variable	Clause	Number	%	Variable	Clause	Number	%
Gender	Female student male student	62 43	59.0 41.0	Grade	First Second Third Fourth	53 13 17 22	50.4 12.4 16.2 21.0
Religion	Yes no	41 64	39.0 61.0				

4.2. General characteristics of sample reliablity and feasibility of measurement items

All of the variables related to self-esteem used in this study were refined based on the variables presented in previous studies, and exploratory factor analysis was performed to find specific intrinsic dimensions. For self-esteem, reliability analysis and factor analysis were performed for a total of 10 measurement items. As a result, two items that hindered internal consistency were removed, and a factor analysis was performed for a total of eight items. As a result of the analysis, the KMO value was .818, which could be judged to be suitable for factor analysis, and the cumulative variance explanatory coefficient was 66.709%. As shown in the analysis results presented in <Table 2>, factor 1 was assigned the name of the factor “positive self-esteem” based on the meaning of the five loading variables, and Cronbach's Alpha value was also found to be 0.634, and factor 2 was loading. Based on these three variables, it was named “negative self-esteem” and Cronbach's Alpha coefficient was 0.828.

Table 2. Factor analysis on self-esteem.

Neme of variable	Factor items	Factor loading	Value	Dispersion explanatory	Reliability
Variable 1 positive self-esteem	I can do a good job with most others. I think I'm worthy of the rest of the world. I think I have a good character. I have a lot to be proud of myself. I have a positive attitude toward myself.	.824 .741 .737 .712 .652	2.883	36.034	.634
Variable 1 negative self-esteem	Sometimes I think I have nothing good about it. Sometimes I feel like a really worthless person. Generally I feel like I'm a failure.	.838 .827 .793	2.454	30.675	.828

One item was removed from the five items related to gratitude tendency, and the KMO value was 0.883, which could be judged to be suitable for performing factor analysis <Table 3>. Also, as a result of the reliability measurement, Cronbach's Alpha value was also high at 0.844.

Table 3. Factor analysis on gratitude tendency.

Neme of variable	Factor items	Factor loading	Value	Dispersion explanatory	Reliability
Gratitude tendency	There are so many people in my life who are grateful and grateful. There are many things to list that I have been grateful for so far. When you look around the world, there's not much to be grateful for. As I get older, I feel grateful for people, events and situations. I have never felt much gratitude for the person or situation I have met so far.	.824 .802 .767 .767 .762	3.079	61.584	.844

4.3. Hypothesis verification

Difference analysis(t-test and ANOVA) was conducted to find out the difference between the gratitude tendency(hypothesis 1) according to the characteristics of university students, and the characteristics of university students generally include gender, grade, and religion. The difference between appreciation propensity was significant only in gender and religion actually <Table 4>.

In this part, I am trying to make the relationship more meaningful for each grade(53 freshmen) who received a special lecture on emotion and happiness by writing gratitude compared to the major and non-major grades(2nd-4th grade). In other words, three special lectures on online emotion classes and three to seven appreciation diaries as a facilitating factor in order to cultivate an appreciation tendency. University students(53 first graders) who wrote a thank-you letter, an experimental group and major. There was a significant difference from the non-major(2nd to 4th grade) control group.

As a result of the analysis, in terms of gender, female students showed a relatively high appreciation tendency, and in religion or not, students with religion showed higher appreciation tendencies <Table 5>.

Table 4. The difference between the gender and the gratitude tendency of university students.

Factor	Gender		t(p)
	Female students (n=62)	Male students (n=43)	

Gratitude tendency	4.10 ± .71	3.90 ± .56	1.674(.097)*

Note: *p<0.1, **p<0.05, ***p<0.01

Table 5. The difference between the religion and the gratitude tendency of university students.

Factor	Religion		t(p)
	Yes (n=41)	No (n=64)	
Gratitude tendency	4.16 ± .56	3.93 ± .70	1.811(.073)*

Note: *p<0.1, **p<0.05, ***p<0.01

As a result of conducting a correlation analysis on the self-esteem and gratitude tendency of university students(Hypothesis 2), significant correlations were found for both self-esteem factors. As a result of the analysis, positive self-esteem shows a positive(+) correlation with gratitude tendency, and negative self-esteem shows a negative(-) correlation with gratitude tendency <Table 6>.

Table 6. The relationship between self-esteem and gratitude tendency of university students.

Division	1	2	3
Positive self-esteem (1)	1		
Negative self-esteem (2)	-	1	
Gratitude tendency(3)	.501(.000***)	-.285(.003***)	1

Note: *p<0.1, **p<0.05, ***p<0.01

5. Conclusion and Implications

The purpose of this study was to examine the relationship between self-esteem and gratitude tendency for a smooth university life during the corona virus infection(Corona 19) period, and the difference between the gratitude tendency factors according to the characteristics of university students.

The analysis results and implications according to these research hypotheses are as follows.

First, according to the characteristics of university students, in the relationship between gratitude tendency, the characteristics of university students were classified into gender, grade, and religion. As a result of the analysis, significant differences were found in gender, grade, and religion status in the relationship between gratitude tendency.

As mentioned in the text, people with high gratitude tendency show distinct differences in three psychological areas emotional and well-being, pro-sociality, spirituality, and religion when compared to those with low gratitude tendency. People with a higher appreciation disposition experience more positive emotions and life satisfaction, and lower negative emotions such as depression, anxiety and jealousy[23][24][33].

Second, in the relationship between self-esteem and gratitude tendency of university students, positive self-esteem has a positive(+) correlation with gratitude tendency, and negative self-esteem has a negative correlation with gratitude tendency(-). In general, it is reported that people with high gratitude tend to experience less psychological problems such as depression, anxiety, and loneliness, and also have a high sense of well-being for life[30]. Therefore, in this period of corona 19, university students are also subjective to life by increasing their gratitude tendency through positive self-esteem. They will feel psychological well-being and happiness. Well-being can be expressed as a feeling of happiness.

The summary of this study is that it aims to suggest a basic plan to spend a time of university students smoothly without psychological wandering and departure due to the constraints of daily life caused by corona virus infection(corona 19) in university students' life, which is the time of career decision of life[34]. And for this study, I suggested that they tried to send thank-you letters to their parents by text or sns(kakao talk), and then they wrote thank-you letters at the same times they wrote thank-you diary during the day, and so on. Following a result of this execution, I found out that the positive self-esteem and gratitude tendency of the participating students increased. As mentioned in the main subject, It can be enhancing gratitude tendency through the practice of "Thanks Sharing", it will help students overcome the stress of Corona 19 period, external and internal stress and adapt to university life. So it will be a way to spend the period of university students smoothly without wandering and leaving in their life which is the time of career decision.

As a result of this study, women students showed higher gratitude than men students, and as a result of investigating the existence of religion, students with religion showed higher gratitude. The results of this study have limitations in generalizing them. However, in the present era where human disaster situations such as Corona 19 are frequently exposed, for the students they need to practice continuous "Thanks Sharing".

Finally, I would like to suggest that it will be a time to build a vision of a happy life through not only helping to adapt to university life by raising self-esteem and gratitude propensity, but also overcoming stress, challenging each goal, and experiencing through immersion in the field of interest. It will be a good idea to create an environment so that they can have their preferred religion. Therefore, in future research I will try to do follow-up study, the comparison results of the experimental group and the control group suggest that the related data provide the basic data specified in the student guidance.

6. References

6.1. Journal articles

[1] Park GY & Lee WB & Lim YJ. Covid-19 and Some Implications to AI. *Robotics & AI Ethics,* 5(1), 16-24 (2020). [Article]

[3] Wood AM & Joseph S & Linley PA. Coping Style as a Psychological Resource of Grateful People. *Journal of Social and Clinical Psychology*, 16, 1108-1125 (2007).

[4] Lee SH & Kim SJ. The Degree of Perceived Stress, Depression and Self-esteem of University Students. *Journal of Korean Public Health Nursing,* 26(3), 453-464 (2012).

[6] Song YK. A Convergence Study of Stress Caused by the Epidemic of Covid-19 Quality of Life and Positive Psychological Capital. *Journal of the Korea Convergence Society,* 11(6), 423-431 (2020).

[7] Kwak KJ. Life Satisfaction of Adolescents in Terms of KLSSA. *Korea Journal of Psychology,* 2(1), 5-16 (1995).

[8] Jo SG. Terrorism Crisis on Northeast Asia. *Internatioal Journal of Crisis & Safety,* 5(1), 35-42 (2020). [Article]

[9] Kwon SJ & Kim GH & Lee HS. Validation of the Korean Version of Gratitude Questionnaire. *Korea Journal of Psychology,* 11(1), 177-190 (2006).

[10] Kim CK. Effects of Perceived Death and Self-esteem on Meaning in Life among University Students. *Journal of the Korean Public Health Nursing,* 27(3), 539-550 (2013).

[11] Kim MS & Min JS & Hong IS. The Relationship with Empathy Ability, Job Satisfaction and Counseling Satisfaction in the Psychological Well-being of Counseling Teachers. *Korea Journal of Counselling Psychology Theraphy,* 3(2), 3-14 (2012).

[14] Lim JH & Jh UY & Oh YK & Yoon YJ. The effects of Dispositional Gratitude and Cognitive Flexibility on the Interpersonal Competence of University Students. *Studies of Korea Youth,* 27(2), 93-120 (2016).

[15] Choi MS & Son CN. The Effects of Purpose in life on Self-esteem, Problem Solving Attitudes and Fear of Negative Evaluation. *The Korea Journal of Health,* 12(4), 951-967 (2007).

[16] Mc-Cullough ME & Emmons RA & Tsang J. The Grateful Disposition: A Conceptual and Empirical Topography. *Journal of Personality and Social Psychology,* 82(1), 112-127 (2002).
[17] Jo KH & Lee HJ. Relationship Between Self-efficacy, Depression, Level of Satisfaction and Death Attitude of University Students. *Journal of Korea Academy of Nursing,* 38(2), 229-237 (2008).
[18] Emmons RA & McCullough ME. Counting Blessings Versus Burdens: An Experimental Investigation of Gratitude and Subjective Well-being in Daily Life. *Journal of Personality and Social Psychology*, 84, 377-389 (2003).
[19] Jo KH & Lee HJ. Relationship Between Self-efficacy, Depression, Level of Satisfaction and Death Attitude of University Students. *Journal of Korean Academy of Nursing,* 38(2), 229-237 (2008).
[20] Lim YJ & Lee MS. Implications of Emotional Coaching and Integrated Art Therapy Teaching Method on Leadership Education in the AI Era. *Robotics & AI Ethics,* 5(2), 42-29 (2020). [Article]
[21] Park SO & Park SJ & Ko GY. Development of Health Assessment Instructional Module Based on Problem Solving Learning with Priority Given to Stroke Patients Investigation in Korea. *International Journal of Protection, Security & Investigation,* 4(1), 1-10 (2019). [Article]
[22] Lim KH. The Effects of Stress and Gratitude Tendency on Children's School Adjustment. *The Journal of Elementary Education,* 23(3), 215-238 (2010).
[23] Lee SH & Kim SJ. The Degree of Perceived Stress, Depression and Self-esteem of University Students. *Journal of Korean Public Health Nursing*, 26(3), 453-464 (2012).
[25] Shim WY. Mediation Effects of Self-esteem in the Relationship Between Appearance Satisfaction and Happiness of Elementary School Students. *The Journal of Elementary Education,* 25(4), 31-51 (2012).
[26] Kwon SY. Causal Relations among Perceived Depression, Self-esteem, and Social Support of Adolescents. *Tamna University Middle School Student's Education Analysis*, 56(2), 93-118 (2006).
[27] Suh KH & Sin HJ & Yang SA. Relationship Between Narcissism, Self-esteem, Depression, and Happiness among Children in Early Aolescence. *Korean Journal of Youth Studies,* 19(10), 101-119 (2012).
[28] Pinquart M. Creating and Maintaining Purpose in life in Old Age: A Meta-analysis. *Journal of Ageing International,* 27(2), 90-114 (2002).
[29] Sung MH. The Relationships Between Peer Attachment, Self-esteem, and Adjustment to University Life in Female University Students. *Journal of Korean Academy of Public Health Nursing,* 22(1), 84-96 (2008).
[31] Park CY. The Relationship Between Self-leadership and Self-esteem of University Students. *Korean Journal of Physical Education,* 53(2), 137-149 (2014).
[33] Emmons R. Gratitude, Subjective Well-being, and the Brain. *The Science of Subjective Well-being*, 11, 469-489 (2008).
[34] Choi YS & Lee JB & Liang D. Effect of Fun of Elderly Women Participating in Health Qigong on the Health-related Quality of Life. *International Journal of Crisis & Safety,* 5(2), 11-19 (2020). [Article]

6.2. Thesis degree

[12] Jeong HS. Recognition towards Good Death among Physicians and Nurses in an Area. Catholic University of Busan, Master's Thesis (2010).
[13] Byun KB. The Correlation Between Self-control, Self-esteem and Subjective Happiness. Kunyang University, Master's Thesis (2005).

6.3. Books

[2] Choi WS & Oh MN. The Study of University Students' Depression and Stress. Yeongnam District Development Research Center. Daegu (1998).
[24] Rosenberg M. Self-concept and Psychological Well-being in Adolescence. Academic (1985).
[30] Rosenberg M. Society and the Adolescent Self-image. Princeton University (1965).
[32] Gatman J & Choi SA & Jo B. Emotional Coaching to Communicate with My Child. Haenam (2020).

6.4. Additional references

[5] https://nct.go.kr/ (2020).

7. Appendix

7.1. Authors contribution

	Initial name	Contribution
Lead Author	JK	-Set of concepts ☑ -Design ☑ -Getting results ☑ -Analysis ☑ -Make a significant contribution to collection ☑ -Final approval of the paper ☑
Corresponding Author*	YL	-Corresponding ☑ -Play a decisive role in modification ☑ -Significant contributions to concepts, designs, practices, analysis and interpretation of data ☑ -Participants in Drafting and Revising Papers ☑ -Someone who can explain all aspects of the paper ☑

2021 6(1) 36-44 Submission: 2021/02/10, Peer review: 2021/02/20, Accepted: 2021/02/25, Published: 2021/03/30

International Journal of Human & Disaster

Publisher: J-INSTITUTE
ISSN: 2423-8260

Website: www.j-institute.jp/disaster/
Editor: disaster@j-institute.jp

Corresponding author
E-mail: cjs7470@hanmail.net

dx.doi.org/10.22471
/disaster.2021.6.1.36

A Study on the Nail Art Design of Andy Warhol's Works to Protect HUMAN NAIL DISASTER

Nahyeon Kim[1]
Yewon Arts University, Yangju, Republic of Korea
Jungsoon Choi[2*]
Yewon Arts University, Yangju, Republic of Korea
Seona Baek[3]
Yewon Arts University, Yangju, Republic of Korea

Abstract

Purpose: *Today, people take care of their appearance and show their own various personalities, and even though nails are a small part of fashion, hair, makeup, and nails, They manage, care, and complete the overall style to protect their nails from nail disaster. There are many hairstyles, makeup, and fashion using pop art, but few works using nail art, and the goal of this study is to broaden the scope of nails by applying bright colors, pop culture, and repetition, the main characteristics of representative pop art artist Andy Warhol.*

Method: *First, the theoretical background of Andy Warhol and nail art will be examined. Second, the life and features of Andy Warhol's work will be analyzed. Third, the concept and expression technique of nail art will be analyzed. Fourth, based on the above research, a nail artwork will be created utilizing Andy Warhol's work as a motif. A research method will be conducted revolving around a domestic thesis, specialized books and a pop-art nail art design will be presented by applying Andy Warhol's work.*

Results: *Artwork 1 was drawn with the motif of Superman after Andy Warhol quit commercial design and started fine art. Unlike the previous ones, it was drawn by separating Superman's body and the word Puff and the full of smoke deliver a feeling of a great explosion. Artwork 2 is a work with a motif of Green Coca-Cola bottles, and several Coca-Cola, the symbol of the United States, is characterized by being arranged in the same size. Artwork 3 is a work inspired by Campbell Soup, a representative icon of popular consumer culture that anyone can purchase.*

Conclusion: *Since nail art is an artwork in which everything must be expressed in a small part of the nail, the study found that design can be made even in a small space of the nail by applying the characteristics of Andy Warhol's work. In this attempt, nail art aims to expand the scope of nail art by increasing research on nail art design using pop art as well as nail disaster and protection.*

***[Keywords]* Art, Design, Disaster, Human, Nail**

1. Introduction

Today, as growing numbers of women are joining the workforce[1], Women tried to protect themselves from nail disaster. improved women's living standards[2] and their higher interest in beauty made women care about their own individuality. Nail Art is a small part[3] compared to fashion, hair beauty and make-up, unlike in the past, however, Nail art today[4] sees a greater proportion of investment made in the care and protect of people's hands and feet.

The structure of the fingernails is a hard, translucent, flat square-like plate on the surface of the tip of the finger, with a thickness of approximately 0.5 to 0.75 mm, and matrix produces cells to control the growth of the fingernails, resulting in unbalanced growth and suspension of the fingernails. Also, when using nail polishes or removers, it is important to select the ones that have been considered for dehydration or dehydration of nails and to protect them by nail treatment[5].

If you dress up too much, more and more people are in need of improvement due to damage to their nails through long-term wrong nail care. Oxidization technology suggests that the basic ingredient of nails is the content of keratin, a protein that causes damage to the nails as the content of ketarine and the moisture content of the nails decreases[6]. There are many causes of nail damage, such as lifestyle, lack of nutrition, ultraviolet rays, dryness, frequent nail art procedures, damage to the nail's hair, and poor health, the color of the nail's ancestors changes, nail cracks and cracks[7].

Healthy and beautiful nails are directly related to proper nutrition. In the event of malnutrition, the skin becomes dry, the fingernails become weak, and they break or tear. These symptoms can be improved by vitamin A, B, C, E, or calcium, zinc, iron and sufficient water intake[8].

Hot oil manicure or paraffin may be performed if the nails are damaged or cracked, or if the cuticle is rough. It provides moisture and nourishment to dry skin and nails in winter and softens cuticles and hang nails[9].

By washing or taking care of hands[10], Nail care can serve as an opportunity to protect the tip of the Nail, prevent the Nail from being easily broken, and enhance the inferiority feeling about their hands into an aesthetic desire.

Nail art in the past takes care of hands and toenails, on the contrary, today's Nail Art is recognized as a perfection, and the proportion of investment in Nail care has increased regardless of age and gender. In the case of Nails, which are small parts compared to fashion, hairstyle, and make-up, simple care and color treatments, Nail extension with artificial Nails using various materials, and various techniques are used to express them splendidly.

This study aims to expand the scope of nails by creating a variety of nail art designs based on the works of Andy Warhol, a representative pop art artist. Efforts will be made to incorporate repeatability, popular materials and colorful colors, which are Andy Warhol's Work features, into Nail Art Designs.

Among the beauty research papers on Andy Warhol, research focusing on make-up and hairstyle are being actively conducted, but the research on nail Art is insignificant. Hopefully, the future nail Art Design research will see great progress by connecting a motif of Andy Warholas' Work with Nail Art.

2. Media-Based Learning

2.1. Andy warhol

Andy Warhol’s real name is Andrew Warhola, who probably didn't like what was called Warhola, so he removed ‘a’ from Warhola and started to use Warhol[11]. Andy Warhol's skin and hair turned white due to pigment deficiency in childhood and he wasn’t very strong due to frequent neurological diseases. So Andy Warhol spent a lot of time in bed, at the time when his mother, an artist, used to give comics and coloring books to her son[12].

After graduating from college, he went to New York, started his career as a commercial designer and worked as an illustration for the fashion magazine ‘Glamour’. Even though it was his first job, the illustration in ‘Glamour’ was widely acclaimed[13].

Andy Warhol also worked on drawings and paintings, and after graduation, he started his career as a commercial designer. His career as a commercial artist includes not only illustrations, but also advertising campaigns, covers for disc jackets, and shoe advertisements. He worked with Columbia Records, Eye Miller, Vogue, and Tiffany as well as the magazine <Glamour>[11].

Andy Warhol, who has a rich imagination and drawing skills, had a unique ability to infuse the illusion of various colors into black and white illustrations, so he produced many illustrations from stockings to perfumes, which shows an example of why Andwarhol chose consumer goods as the subject of his art in the early 1960s[14]. He grew into the best commercial artist and achieved economic success by winning the Art Director Club Award. However, he had another goal: it is to succeed in fine art as well as in commercial art. Andy Warhol attempted to start his career as a pure artist by transferring popular images such as advertisements and cartoons to the canvas[11].

While converting to fine art, he rejected the work of the artist's hand, and repeatedly printed out the impersonal and uniform images found in media newspapers and advertisements with a mechanical feeling using a silkscreen, a technique of commercial art, which brought him fame[15].

Andy Warhol kept an eye on the trends of the art world in order to establish his position. After contemplating how to create a work that gave the world a fresh impact, Andy Warhol came to face the repeatability and uniformity from mass media, a modern mass media before other pop artists realized it. He directly reflected the mass consumption that appeared in American society in 1960 through repetitive images[16]. For example, he brought goods well known to people, such as a Campbell soup can and a box of Brillo, as a motif and used the packaging as it is[17]. In particular, the admiration for the stars that everyone can see on the screen influenced him from his childhood, and he wanted to become a social celebrity in common sense. So, he admired celebrities and famous writers, collected photos of actors and joined a fan club. The desire to identify himself with them persisted after success. The photographs of stars, which he began collecting from this time were used as the subject of his work[18].

The artistic features of Andy Warhol's work are repeatability, popularity, silkscreen technique, and various colors, and use of the colors which brings transformation to the Andy Warhol's work with repeatability expressed on.

As preceding papers that were studied in relation to Andy Warhol's work analysis, Lee Dong-ju[14] categorized it into popular stars, incidents and political subjects, cartoons, and product images by image. And Jung Su-yeon[19] classified it into product images, portraits, death and disaster images by image and material. Lee Saemina[20] classified it as images of public stars, advertisement images, and incidents and accidents obtained from the mass media. Kim Yunjeong[17] described divided Andy Warhol's paintings into cartoons, mass-produced, popular, and disaster series according to the motif of the work. Shin Jeong-yeon[18][21] divided it into commercial design, cartoon, popular water, mass-produced product, and disaster series. Based on the above, researchers intend to group it into cartoons, commercial designs, and mass-produced products.

2.2. Nail art

Nail refers to nails and toenails, and manicure is a word derived from Latin: manus(hand) and care(care) are a compound word. This means 'to take care of the hands' and at the same time, nail care refers to the process of cleansing and beautifying the surroundings of hands and nails, including nail shape arrangement, cuticle arrangement, hand massage, and coloring[22].

In addition to organizing nails, nail art refers to decorating or embellishing nails and it is a field that can express satisfaction and one's own personality. In the past, nail care was care-oriented, but today's nail art has broadened the area of expression due to the development of various techniques and materials[21].

Expression techniques include hand painting, stone art, marble art, emboss art, decal art, protrance, and gel art.Hand painting refers to a picture drawn by hand. It is a technique of drawing and designing on nails using acrylic brushes and acrylic paints. Because acrylic paint dries quickly, it is good to apply multi-coats coloring and can be expressed in various ways by the operator[23].

Stone art is a technique in which stones of various sizes are placed on the nails with tweezers. A three-dimensional feel can be added by using a stone on the nail body that can look flat and boring[24].

For nail art using marble, a design is created using wood sticks or toothpicks by mixing two or more polish colors or created using wood sticks or toothpicks by dropping the polish on water. Modification is possible before curing and can be maintained longer than general polish[22].

Emboart is a technique of expressing a semi-dimensional shape on the nail body using acrylic powder. After dipping a brush in liquid, then applying it in powdery powder to express various shapes of art[25].

There are two types of decal art: water decal and sticker-type decal. The water decal is to cut the picture you want to attach to the desired size, soak it in water to attach it on the nails after removing moisture. The sticker-type decal is immediately peeled off and pasted, and a topcoat is applied in the final step[26].

Protrance is a technique in which a pattern in the form of a film appears when a desired photo or picture is cut to fit the size of the nail, then applied a topcoat, dried, cut to size, soaked in water, and peeled off by sanding[27].

Gel art is a polymer gel-type material that is deformed and hardened by the UV reaction. It does not harden until the light is shining, so it can be corrected, and there is no smell, so it is possible to work for a long time[24].

3. Research Method

The study summarized Andy Warhol's life, work features, the concept of nail art, and expression techniques. Nail artworks based on Andy Warhol's work as a motif was created. As for the research method, domestic thesis, academic journals, and specialized books were reviewed. By analyzing Andy Warhol's work, three nail art designs were produced.

The contents and methods of the study are as follows.

First, the theoretical background of Andy Warhol and nail art will be examined

Second, the life and features of Andy Warhol's work will be analyzed.

Third, the concept and expression technique of nail art will be analyzed.

Fourth, based on the above research, a nail artwork will be created utilizing Andy Warhol's work as a motif.

A research method will be conducted revolving around a domestic thesis, specialized books and a pop-art nail art design will be presented by applying Andy Warhol's work.

4. Research Results

4.1. Superman

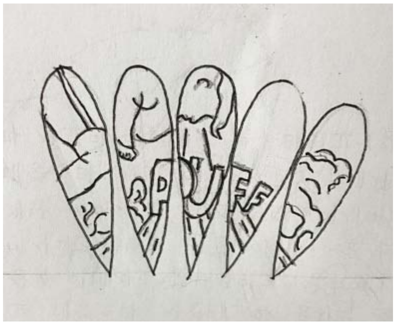
In 1961, when Andy Warhol quit commercial design and began fine art, he painted Superman. This Superman reproduces the original cartoon as it is, but also crayons the top to make it look like a pure painting, and deliberately blurs the words of the speech bubble in an abstract expressionist method[15].

<Work 1> is a work with the motif of the cartoon Superman. The word "Pufff" and the appearance full of smoke give the feeling of a great explosion. Superman's point, the color of the clothes, emphasized the cartoonish feeling.

In the work process, the whole tip is covered with light blue color by tapping it on a sponge and the color is painted on the whole. After grasping the overall location and composition, draw with hand painting. In order to look more clearly, the entire line was applied in black color.

The results of the work are shown in <Table 1>.

Table 1. Superman.

Motif image	Artwork	Work result
		
	Color suggestion	

Note: Andy Warhol, Superman, 1961.

4.2. Green coca cola

The reason Andy Warhol used Coke bottles as a material is that the Coke bought by rich and poor consumers is just the same Coke, and mass production enables everyone in the industrial society to enjoy the same product. He borrowed the product as it was, including advertisements and reproduced it mechanically. As a result, the artist's intentions or individuality were not intervened and expressed as a non-individual image[17].

<Work 2> is a work with a motif of green Coca-Cola bottles, which are characterized by being arranged in the same size as several Coca-Cola, the symbol of the United States.

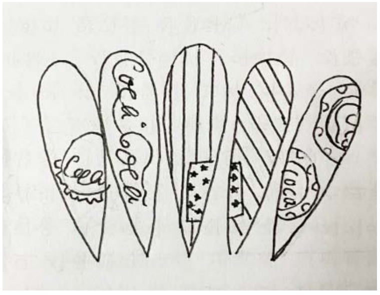
For the first left and last right, apply the entire black color. Apply a thin layer of foil glue and then, when completely transparent, apply a holographic feel of silver foil in several places. The Coca-Cola bottle is an iconic image of Coca-Cola, but it is expressed differently by drawing the cap.

The second step is to apply the whole with red color. Cut the red foil to fit the nails to make it look a little clearer. After applying a thin layer of base gel or clear gel, attach the red foil cut in the uncured state, make it close without any air holes, cure, remove one by one with tweezers, organize the protruding parts with a file, and then write Coca-Cola letters.

In the third and fourth step, the American flag and the Coca-Cola logo were painted as it was a symbol of the United States, and the entire white gel was applied to give the American flag a distinction, and silver glitter was used to give it a glamorous appearance, and a star-shaped decal technique was used.

The results of the work are shown in <Table 2>.

Table 2. Green coca cola.

Motif image	Artwork	Work result
		
Color suggestion		

Note: Andy Warhol, Greens Coca-Cola Bottles, 1962.

4.3. Campbell's soup can

The cans of Campbell's soup, which Andy Warhol introduced in his paintings, is such an American instant food that he said he ate it often. Campbell Soup is a representative icon of popular consumer culture that anyone can purchase, and it neutrally reflects the standardized and repetitive daily life of modern people, like his perception that when it comes to Coca-Cola, the coke the president drinks and the coke he drinks are the same.

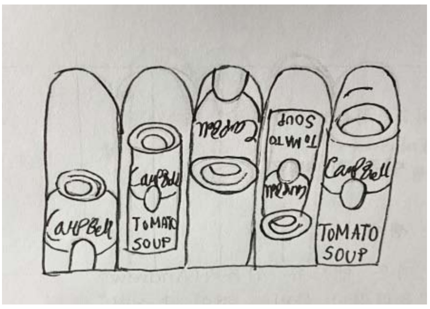
Andy Warhol, who introduced commercial art into his work, emphasized the popularity of Campbell's soup, which can be found in everyday life, using a repetition technique[28].

In <Work 3>, A nail art design was created by applying a picture that repeatedly appeared in several Campbell soups, they were arranged side by side in the same size in the work, but in the nail art design, they were drawn only half or drawn upside down as if they were enlarged.

In the course of the work, all five are applied in lemon color. A can of Campbell's soup was drawn in half or as if the whole was enlarged or upside down. Letters are written in red and white, which are the symbols of Campbell Soup, and the picture on the top of the can is drawn in black or dark gray color, then the non-wipe top without any remaining uncured is put on it and cured. Then, the mirror powder was put on the lid by color, rubbed, and the powder around was wiped off with a gel cleanser on a wet tissue and lined up. The lid was expressed in detail as if giving a contrast to the lid so that it could appear three-dimensional.

The results of the work are shown in <Table 3>

Table 3. Campbell's soup can.

Motif image	Artwork	Work result
		
	Color suggestion	

Note: Andy Warhol, 32 Campbell's Soup Cans, 1961.

5. Conclusion

Today, as growing numbers of women are joining the workforce, they get increasingly interested in beauty and care about their own individuality. In the past, nails were managed and decorated to protect against damage, one of the elements of human disasters, but today's nail art has been recognized as a finished product, increasing the proportion of investment in management regardless of gender.

Accordingly, the study attempted to create a variety of nail art designs based on Andy Warhol's work, which is a design element, further from damage, one of the disaster elements of nail art. As a result, the nail tried to incorporate Andy Warhol's work features such as repetition, popular materials, and bright colors into the nail art design, as well as the purpose of protecting from disasters.

For the research method, the theoretical background is found using a domestic thesis, journals, and specialized books and a nail art design with the features of Andy Warhol's work is produced.

Work 1 is a work produced with a motif of <Superman>. Seeing the word Puff and full of smoke, it delivers a feeling of a great explosion. The color of the clothes, Superman's point, emphasized the cartoonish feeling. After drawing by hand painting, the entire line was drawn in black to make it look more vivid.

Work 2 is a work based on <Green Bottles of Coca-Cola>, which is characterized by several coca-cola, the symbol of the United States, arranged in the same size.

The Coca-Cola bottle is an iconic image of Coca-Cola, but it is expressed differently by drawing the cap. As a symbol of the United States, the American flag and the Coca-Cola logo were painted.

Work 3 is a work inspired by <32 Campbell Soup Cans>. Campbell Soup is a representative icon of popular consumption culture that anyone can purchase. A design on the nails with the motif of several Andy Warhol's Campbell Soups that appeared repeatedly was created. The design was arranged side by side in the same size in the work, but in the nail art design, they were drawn only half or drawn upside down as if they were enlarged.

Using Andy Warhol's work as a motif, it is hoped that research on nail art design linked to nail art will be developed in addition to nail disasters and protection.

6. References

6.1. Journal articles

[1] We HJ & Lee JB & Kim EJ. Exploring the Experience of Job Convergence Change in the Beauty and Health Industry Using Grounded Theory. *Protection Convergence*, 5(2), 84-93 (2020). [Article]
[2] Choi YS & Lee JB & Liang D. Effect of Fun of Elderly Women Participating in Health Qigong on the Health-related Quality of Life. *International Journal of Martial Arts*, 5(2), 11-19 (2020). [Article]
[3] Kim TS & Lee JB. Analysis of Perception of Naturopathy Convergence and Utilization Satisfaction Perceived by Skin Beauty Industry Workers. *Protection Convergence*, 5(2), 94-102 (2020). [Article]
[4] Kang YD. Design of Liberal Arts Curriculum Centered on Core Competencies. *International Journal of Human & Disaster*, 5(2), 49-57 (2020). [Article]
[5] Lee EY & Shin HJ & Cha WS. The Effect of Nail Enforcement on Damaged Fingernails from Nail Procedures. *Korean Journal of Aesthetics and Cosmetics Society*, 7(2), 63-78 (2009).
[8] Do YH & Kim JD. Study on Effects of UV Gel Nail Art on Nail Health. *Korean Society of Cosmetics and Cosmetology*, 6(2), 139-149 (2016).
[10] Park CM. Practice Levels of Hand Washing and Cough Etiquette for the Prevention of Infectious Diseases. *International Journal of Human & Disaster*, 3(1), 5-9 (2018). [Article]
[18] Lee YJ & Park MY. Andy Warhol's Influence on the World of Art and Fashion. *Journal of the Korean Society of Clothing and Textiles*, 50(1), 183-196 (2000).

6.2. Thesis degree

[6] Ham HG. The Study of Oil Soluble Emollients for Nail Protection and Moisturizing Effects. Konkuk University, Master's Thesis (2014).
[7] Jeon YH. The Influence of the Application Methods of Nail Coloring Upon the Damage and Appearance of the Nails. Konkuk University, Master's Thesis (2010).
[13] Jang EA. A Study on Analysis of Works Based on Andy Warhol's Dual Perspective. Hongik University, Master's Thesis (2004).
[14] Lee DJ. A Study of Popular Images in Andy Warhol's Work. Kyeonggi University, Master's Thesis (2012).
[15] Kim YJ. A Study on Fashion Design Applying Andy Warhol's Paintings: Focusing on Digital Textile Printing Technique. Ewha Womans University, Master's Thesis (2009).
[16] Seo JY. A Study on the Popularity of Andy Warhol's Work. Kyeonggi University, Master's Thesis (2015).
[17] Kim YJ. A Study on Andy Warhol's Borrowing and Repetitive Images. Hongik University, Master's Thesis (2008).
[19] Jeong SY. A Study on Andy Warhol's Paintings: Focusing on Works from the 1960s. Ewha Womans University, Master's Thesis (2009).
[20] Lee SMN. A Study of Andy Warhol's Painting Techniques and Popular Images. Dongguk University, Master's Thesis (2008).
[21] Shin JY. A Study on Nail Art Design Applying Andy Warhol's Work. Sungshin Women's University, Master's Thesis (2014).
[22] Wang SH. A Study on Nail Salon Artworks Using UV(Ultraviolet) Gel. Daegu University, Master's Thesis (2013).
[23] Kim SH. A Study of Nail Art Based on Korean Folk Paintings. Konkuk University, Master's Thesis (2011).
[24] Shin SG. A Study on Nail Art Design according to Ethnic Fashion Types. Sookmyung Women's University, Master's Thesis (2018).
[25] Woo YJ. An Avant-garde Interpretation of Nail Art: Creating Works Based on Contemporary Art. Nambu University, Master's Thesis (2014).
[26] Jeon HW. A Study on Gel Nail Art Design With Minimalism as the Motif. Seokyeong University, Master's Thesis (2018).
[27] Jo HY. A Study on Nail Art Design Based on Gustav Klimt's Painting Technique. Nambu University, Master's Thesis (2012).

6.3. Books

[9] Kim GS & Kim NS & Kim JA & Lee HS. Nail Care & Art. Komoonsa (2002).
[11] Kim GU. Warhol and Friends. Art Culture (1997).
[12] Isabel K & Jeong YJ. Andy Warhol. Book Publishing (2008).
[28] Hong CH. Understanding of Contemporary Art. Yangseowon (2013).

7. Appendix

7.1. Authors contribution

	Initial name	Contribution
Lead Author	NK	-Set of concepts ☑ -Design ☑ -Getting results ☑ -Analysis ☑ -Make a significant contribution to collection ☑ -Final approval of the paper ☑
Corresponding Author*	JC	-Corresponding ☑ -Play a decisive role in modification ☑
Co-Author	SB	-Significant contributions to concepts, designs, practices, analysis and interpretation of data ☑ -Participants in Drafting and Revising Papers ☑ -Someone who can explain all aspects of the paper ☑

2021 6(1) 45-54
Submission: 2021/02/10, Peer review: 2021/02/20, Accepted: 2021/02/25, Published: 2021/03/30

International Journal of Human & Disaster

Publisher: J-INSTITUTE
ISSN: 2423-8260

Website: www.j-institute.jp/disaster/
Editor: disaster@j-institute.jp

Corresponding author
E-mail: isobcm@gmail.com

dx.doi.org/10.22471/disaster.2021.6.1.45

Rational Hydrogen Society Review: From the Perspective of the National Infrastructure PROTECTION Plan(NIPP) in Korea

Junho Choi[1]
Soongsil University, Seoul, Republic of Korea

Dongkwan Lee[2]
Kangwon National University, Chuncheon, Republic of Korea

Chongsoo Cheung[3*]
Soongsil University, Seoul, Republic of Korea

Abstract

Purpose: *In line with the global transition to a hydrogen society, Korea is accelerating the vitalization of the hydrogen economy through relevant plans and strategies. In order to revitalize the hydrogen economy, it is necessary to add hydrogen-related matters to the National Infrastructure Protection Plan(NIPP) and to promote continuous stability for the national-level hydrogen infrastructure. This study aims to present direction from a long-term perspective for the addition of NIPP to hydrogen infrastructure.*

Method: *This study reviews and recognizes the importance of efficient construction strategies for hydrogen society. As an example, we analyze the case of Japan, which established a basic plan for hydrogen society before Korea. The factors for realizing the plan were analyzed by categorizing the contents into flexibility, adaptability, and reliability.*

Results: *We were able to find some implications through the case study. First, It is important to seek international cooperation for hydrogen supply and to respond flexibly to ensure that the plan is not disrupted in order to realize a hydrogen society and to secure safety. Second, it is necessary to regularly revise and implement the roadmap over time so that the plan can adapt well to time. Thirdly, In order to reinforce the credibility of the plan, a risk communication plan to enhance Local Acceptance should be devised.*

Conclusion: *Korea cannot achieve empirical results simply by reducing carbon emissions and building an eco-friendly hydrogen society. It is important to discover demand and monitor hydrogen-related infrastructure integrally with potential stakeholders. In addition, social acceptance, including the central government, local governments, and private businesses, is essential to improve the public's awareness and understanding of hydrogen society and to strategically rearrange hydrogen infrastructure. The establishment of the NIPP with the addition of hydrogen social infrastructure will contribute to raising national interest and increasing public confidence in hydrogen safety.*

[Keywords] ***NIPP, Hydrogen Society, Disaster, Korea, Japan***

1. Introduction

After the industrial revolution in the 18th century, the main energy source of mankind was coal. However, coal has been stigmatized as the cause of environmental pollution and the biggest cause of climate change. After the Paris Agreement in 2015, the carbon reduction movement has been spreading around the world, led by major developed countries. On the other hand, hydrogen is evaluated as an eco-friendly energy and is expected to replace carbon energy. Developed countries such as the United States, Japan and the EU are stepping up policies to transform into a hydrogen society. Korea has also established and is implementing roadmap for hydrogen energy policy led by the government. In particular, Korea enacted a law on fostering hydrogen economy and safety management of hydrogen in February 2020 to become a leading country related to hydrogen economy, and it came into effect in February 2021.

The purpose of this study is to effectively introduce hydrogen society and to actively introduce the field of hydrogen society into the National Infrastructure Protection Plan. The National Infrastructure Protection Plan(NIPP), one of Korea's national disaster management systems, has been implemented since 2010 as the necessity of a national social disaster management system emerged in 2003[1][2]. The plan is designed to designate the nation's core infrastructure and prevent the state's functions from being paralyzed in the event of a disaster[3][4]. The NIPP divides the national infrastructure into 9 areas, including energy, information and communication, transport, finance, health care, nuclear power, environment, drinking water, and important government facilities, and consists of 273 in total. Although Korea's hydrogen society is expanding, it has not yet been considered due to the conservative nature of the NIPP in Korea.

For example, Korea has designated national core technologies in the Ministry of Trade, Industry and Energy. These technologies are national core technologies that can have a significant negative impact on Korea's security and national economy development if they are leaked abroad. In the automobile and railroad sectors, matters related to FCEV(Fuel Cell Electric Vehicle) fuel cell systems have been specified and the need for protection is well known. It is also necessary for the NIPP to think forward-looking on matters related to hydrogen.Therefore, it is necessary for Korea to add matters related to the hydrogen society to be activated to the NIPP. This study examines the efficient construction strategy for hydrogen society and recognizes its importance.

This study analyzes Japan's Strategy for Hydrogen Society among major countries that are pursuing strategies before Korea. Japan announced that it would promote a hydrogen society without carbon dioxide emissions by expanding the hydrogen fuel cells and FCEV in the National Energy Basic Plan in 2014. The Prime Minister declared and accelerated the realization of the world's first hydrogen society in April 2017. In addition to the active promotion strategy, the case of Japan gives us more implications than other countries in the following aspects. “Building a hydrogen society” is also part of it.

First, Japan, like Korea, is a country that imports most of its energy. Second, Japan is undergoing a complete reorganization of its energy supply and demand structure, as a result of the 2011 Great East Japan Earthquake and Fukushima Daiichi nuclear disaster. Third, both Korea and Japan are actively introducing hydrogen economy with the conviction that hydrogen will become a new energy system.

Despite this usefulness, research on hydrogen society in Japan is insufficient. There are few research papers dealing with implications for Japanese hydrogen society based on the situation in Korea. Considering this situation, this study analyzes the case of Japan, which promoted the transition to a hydrogen society faster than Korea, and intends to come up with directions and plans for Korea's future.

2. Overview of Hydrogen Society

2.1. Hydrogen energy

Existing energy sources through coal fuel such as coal and oil have an effect on global warming due to excessive emission of carbon dioxide. The interest in energy savings to reduce fossil fuels and energy resources to replace fossil fuels has increased worldwide. Carbon fuels generate greenhouse gases to cause climate change, and interest in hydrogen is growing as a solution. Hydrogen is attracting attention as an energy resource that can simultaneously solve both energy and environmental problems facing the world as shown in the following <Table 1>. The reason is that hydrogen is one of the abundant substances in space and is an eco-friendly energy source that is generated from water and is reduced to water after dissipating energy as fuel. In particular, hydrogen is highly utilized and can be used in almost all fields requiring energy supply. It is also a widely spread universal energy source. It is not the primary energy that can be mined like petroleum and coal, it is produced by by-product hydrogen and Hydrogen Production by Water Electrolysis, and it is capable of long-term energy-carrier[5].

Table 1. Comparison of hydrogen economy and carbon economy.

Hydrogen economy	Item	Carbon economy
Decarbonised hydrogen center	Energy paradigm	Focus on carbon resources(oil, coal, gas, etc.)
Contributing to energy independence through domestic production		Import dependence(99%)
Decentralized energy supply and demand with small investment	Energy supply	Centralized energy supply and demand requiring large-scale investment
Less location restrictions		More location restrictions
Securing technological competitiveness and economies of scale competition	Competition pattern	Resource development and competition for energy
Eco-friendly due to low greenhouse gas emissions	Environmental aspect	Greenhouse gas and air pollutant emission

Note: Relevant ministry hydrogen economy roadmap (2019).

2.2. Trends of building hydrogen cities in developed countries

One of the important reasons for the development of hydrogen energy in the US is energy security. As part of reducing dependence on petroleum-centered energy sources, FCEV has been researched and developed from around 2000. In particular, the state of California has been implementing the zero emission vehicle(ZEV) regulation, which is an exhaust gas regulation since 2009. Governor Brown signed a state law in September 2013 that regulated the expansion of the use of clean vehicles, and announced that it would invest $20 million annually for maintenance of the Hydrogen Station. In addition, the Hydrogen Station was planned to be expanded to 1000 stations by 2030, and the hydrogen energy policy was promoted by forming a public-private partnership centered on the California State Government and the Federal Ministry of Energy[6].

Germany is one of the fastest European countries to pursue a hydrogen energy development plan. Following the German model, other European countries are also pursuing hydrogen city infrastructure maintenance plans. Germany has implemented the Clean Energy Project(CEP), a demonstration project of FCV and Hydrogen Station since 2004, and started the National Innovation Program(NIP), a hydrogen and fuel cell technology innovation program in 2007. In addition, "H2 Mobility," an organization aiming to spread FCEV and Hydrogen Station nationwide after 2015, was launched in 2009. H2 Mobility is a public-private partnership project with the government, car makers and energy companies as members, and aims to install 400 Hydrogen Stations by 2023[7].

Since the announcement of the Hydrogen Economy Roadmap in 2019, Korea's hydrogen city-related projects have developed rapidly with active support from the government. The world's first FCEV was mass-produced, and most of the core parts were domestically produced In 2013. The petrochemical industry has already produced and used hydrogen, so the relevant base and experience have been accumulated. However, construction of the Hydrogen Station infrastructure is insufficient compared to the supply of hydrogen vehicles. The production, storage, and transport of hydrogen energy is still weak. To improve these issues and revitalize the hydrogen economy, the government launched the Hydrogen Economy Committee in July 2020[8].

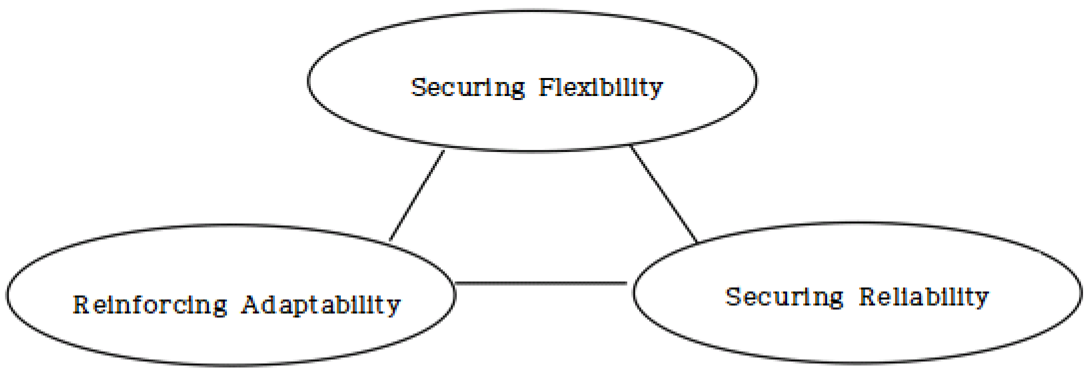
2.3. Research framework

In Korea, justification for promoting a hydrogen society was secured and the hydrogen law was enacted for the first time in the world. This study aims to analyze the necessity of adding hydrogen-related matters to NIPP.

NIPP refers to a system of physical and human functions that can have a significant impact on life, property, and national economy if functions are paralyzed, such as energy and information and communications. The reason for the introduction of NIPP is to designate and protect national infrastructure as the necessity of a social disaster management system emerges from the perspective of national crisis management. When looking at global trends and Korea's national future strategy, it is estimated that hydrogen will occupy a large part of Korea's national infrastructure in the future[9][10]. In order to secure the continuity of operation of such national infrastructure, matters related to hydrogen society must be actively considered in the NIPP, which has a legal basis through the Framework Act on the Management of Disasters and Safety[11].

For the addition of NIPP of hydrogen, this study considered securing flexibility of content, reinforcing adaptability, and securing reliability of the plan. Based on this, the basic direction for the realization of a hydrogen city in Korea is presented through a case analysis of Japan.

Figure 1. The three elements of planning execution.



3. Case Study-Japanese Hydrogen Society Construction Strategy

3.1. Trends and characteristics

The Japanese government added Safety to the three pillars of Energy Security, Economic Efficiency, and Environment in the 4th Energy Basic Plan in 2014 and it is called “3E+S”. Japan's hydrogen energy safety management is based on the proven petrochemical hydrogen safety management. Since it is distributed after thoroughly verifying its safety(Test R&D, verification through demonstration, safety standard development, safety program application, etc.), hydrogen experts recognize that safety management technology is sufficiently secured.

Japan's main strategy is to realize a hydrogen society, set specific goals for each stage, and promote public-private cooperation to build a hydrogen economy ecosystem. Japan announced the “Hydrogen Fuel Cell Roadmap” at the Hydrogen Fuel Cell Strategic Council where industry, academia, research and government experts gathered in June 2014. In addition, public-private activities for realization of a hydrogen society were presented, and three stages of realization goals and tasks were set according to the technical and economic period. Japan is trying to build a hydrogen city by including in the basic plan not only the supply and demand of hydrogen, but also infrastructure maintenance for utilization[12].

Japan tries to give the public confidence by thoroughly investigating accidents related to hydrogen and making it public to the public. Safety technology development is systematically invested by the government and is being promoted through public relations centers. In the early stages, there were cases where the public objected to the installation of the Hydrogen Station because the technical characteristics and safety of hydrogen were not known in detail.

Table 2. Progress in hydrogen society by stages in Japan.

Step	Period	Goals and focus tasks
1	Present	Rapid expansion of hydrogen use(introduction of fuel cells)
		Expanding the use of fixed fuel cells and FCVs, which are already in the commercialization stage establishing Japan's position in the world's hydrogen and fuel cell fields
2	Late 2020s	Introduction of hydrogen power generation establishment of a large-scale supply system of hydrogen
		Expanding hydrogen demand expanding the raw material for hydrogen production as a used energy source established as a new energy source by adding'hydrogen' from the existing'electricity and heat'-centered energy consumption structure acceleration of development/demonstration establishment of strategic partnerships with hydrogen supplier countries realization of low-cost hydrogen prices considering demand expansion
3	Around 2040	Establishment of CO_2 free hydrogen supply system
		Establishment of a CO_2 free hydrogen supply system by utilizing CCS bonding and renewable energy in hydrogen production Commercialization of CO_2 free hydrogen production, transportation and storage
Meaning		Basic plan for intensive development of hydrogen economy for independent energy supply after the Fukushima nuclear power plant accident
Progress		Adoption of basic hydrogen strategy('17.12) ⇨ Presenting the direction until 2050

Note: Agency for natural resources and energy hydrogen fuel cell roadmap (2014).

3.2. Securing flexibility for promotion-international cooperation for supply

Japan established and adopted the cross-ministerial hydrogen basic strategy in December 2017. The core of the basic hydrogen strategy is to supply hydrogen by securing hydrogen price competitiveness at the level of existing fossil fuels. The promotion strategies include "development of an Iinternational hydrogen supply chain" and "expanding hydrogen production using renewable energy resources in Japan". Japan has established a stable system for domestic supply through international cooperation in terms of energy security as well as environmental issues to cope with climate change. In particular, Japan is reinforcing international cooperation to build a hydrogen supply chain that procures hydrogen using foreign unused energy by predicting that domestic production cannot meet demand. The core of the cooperation is to introduce a supply chain that produces, stores, and transports hydrogen from overseas unused energy through CCS(Carbon Capture and Storage) by 2030.

Japan is verifying various empirical models together with the public and government for hydrogen international cooperation. Japan has been conducting a hydrogen supply chain construction demonstration project in cooperation with Australia and Brunei under the support of the New Energy and Industrial Technology Development Organization(NEDO) since 2015. The hydrogen international cooperation project with Australia is the "liquid hydrogen supply chain construction demonstration project”. This project uses unused lignite to extract and liquefy hydrogen and transport it to Kobe by ship. For the transport of hydrogen from Australia, the world's first 8,000-ton liquefied hydrogen carrier departed in December 2019. The international cooperation project with Brunei is called the “organic hydride supply chain establishment demonstration project,” and it is a project to transport hydrogen extracted from gas generated from the Brunei LNG plant to Kawasaki City. In addition, Japan has signed an MOU with Russia, South America, and the Middle East to investigate the feasibility of a hydrogen supply chain[12].

Table 3. Japan's representative hydrogen international cooperation project.

Country	Name of project	Contents	Shipping destination	Cooperation consortium
Australia	Liquid hydrogen supply chain establishment eemonstration project	Transportation by extracting and liquefying hydrogen using Australia's unused brown coal	Kobe	HySTRA
Brunei	Organic hydride supply chain establishment demonstration project	Transporting hydrogen extracted from the gas generated at the Brunei LNG plant	Kawasaki	AHEAD

3.3. Strengthening adaptability-revision and implementation of roadmap by period

Japan announced its roadmap in 2014 and then re-released the revised version in 2016. In the revised edition, Japan reflected the release of FCEV and the supply of home hydrogen fuel cells. The Japanese government ministerial-level meeting decided to establish a basic strategy for realizing a hydrogen society in 2017. The core of the strategy was to establish a hydrogen society ecosystem such as production, supply, and use at the national level to secure a stable supply of hydrogen to reduce greenhouse gas emissions. The third amendment to the roadmap announced in March 2019 reflected the ‘Basic Hydrogen Strategy’ in 2017 and the ‘Fifth Basic Energy Plan’ in 2018. This roadmap embodied the future target price of hydrogen, the performance and price of base technology for each element, and implementation plan.

By establishing a basic hydrogen strategy, policies such as regulatory reform, technology development, and infrastructure maintenance were integrated. As mentioned above, Japan planned a route to receive hydrogen inexpensively through international cooperation, since it is difficult to supply only domestic production when the use of hydrogen energy in the country increases. In this way, Japan has established a low-cost hydrogen supply system domestically, and internationally has plans to develop hydrogen production and supply chains, as well as energy carriers for transport and storage of hydrogen.

Table 4. Hydrogen fuel cell strategic roadmap for plan adaptability(revised).

	Year	Main contents
1st	2014	In April 2014, the need to promote a hydrogen society was raised in the 4th Basic Energy Plan In June 2014, the “Hydrogen·Fuel Cell Strategy Roadmap” was announced at the Hydrogen·Fuel Cell Strategy Council Presenting public-private activities for realizing a hydrogen society Set the goals and tasks to realize a hydrogen society in three stages

2nd	2016	Reflects the launch of FCEV and the expansion of domestic fuel cells Establishment of basic strategy for realization of hydrogen society in 2017 (Japanese government ministerial level meeting) Establish a basic hydrogen strategy and integrate policies such as regulatory reform, technology development, and infrastructure maintenance by department To secure a stable supply of hydrogen, build a hydrogen society ecosystem Promote to solve difficult supply problems with domestic production only through international cooperation
3rd	2019	Reflecting the'Basic Hydrogen Strategy' in 2017 and the'Fifth Basic Energy Plan' in 2018 The target hydrogen price, the performance and price of base technology by element, and implementation plan are specified

Note: Agency for natural resources and energy hydrogen fuel cell roadmap (2019).

3.4. Enhancement of public-private reliability - risk communication to improve local acceptance

In Japan, the government and companies are promoting the supply of hydrogen, but they are paying attention to the fact that the understanding of local residents is insufficient. Resident acceptance is a problem related to people's universal perception and is difficult to improve in a short period. Therefore, it is important to improve based on local acceptance around the power plant rather than public acceptance[13][14][15].

When a hydrogen society is realized, the whole social life changes, so it is essential to improve the acceptance of residents. Particularly in Japan, the fear of hydrogen has been created because the hydrogen explosion occurred in The Great East Japan Earthquake and Fukushima Daiichi nuclear disaster. In particular, in Japan, the Great East Japan Earthquake and Fukushima Daiichi nuclear disaster caused hydrogen explosions, so people are feeling fear of hydrogen. Therefore, the government and businesses that are promoting the project are working to narrow the gap in residents' perceptions and enhance acceptance.

In Japan, various efforts are being made to raise awareness of the fact that residents' acceptance of hydrogen is low. Under the slogan “Using hydrogen is the future of Tokyo,” Tokyo established “Tokyo Hydrogen Day” for the first time in local governments. February 1 is the Tokyo Hydrogen Day, which is derived from hydrogen's molecular weight of 2.01. Various events are held on this day, and the Tokyo Metropolitan Hydrogen Promotion Team shares information about hydrogen with residents and introduces examples of major countries. In addition, the city government promotes hydrogen energy to make it easier for residents to understand through SNS and events.

By creating a hydrogen day, the acceptance of hydrogen energy, which is clearly low in residents' awareness, can be improved through an anniversary. In particular, the government, local governments, and industry-academia-research centers are looking for ways to build a consensus in order to increase the acceptance of residents, who are end consumers.

Hydrogens Station have been installed to realize a hydrogen society in Japan since 2014. After the Fukushima nuclear power plant exploded hydrogen in the Great East Japan Earthquake in 2011, Japanese people have been concerned about the safety of hydrogen. Prior to the installation of the Hydrogen Station, risk communication, such as providing appropriate information, was necessary to gain the understanding of local residents.

In Japan, various surveys and studies have been conducted on social acceptance of hydrogen cities. The “Social Acceptance Survey on Fuel Cells and Hydrogen” conducted by the New Energy Industrial Technology Comprehensive Development Organization in 2009 revealed that hydrogen development technology and anxiety about accidents are a major factor in reducing social acceptability. It pointed out that there is a need to provide information that can raise awareness of the Hydrogen Station and promote knowledge and understanding of technology[16][17]. According to a study on the possibility of occurrence of

NIMBY problems in the FCV distribution process, it was revealed that there is a possibility that NIMBY problems may occur if the Hydrogen Station is installed only with demand forecasting. According to a study on the provision of information to the Hydrogen Station by the local government, the opportunity for the local government to provide information to the residents decreased due to the deregulation of the amount of hydrogen storage. In addition, opportunities for residents to collect hydrogen-related information were reduced, and a place to inquire was lost[18][19][20]. From the above research results, it is important to promote understanding of the necessity along with knowledge of hydrogen cities such as Hydrogen Station. Above all, risk communication to increase the reliability of business operators and local governments is essential[21].

4. Conclusion and Implications

Korea's strategy for building a hydrogen society was slow compared to other advanced countries, but it grew rapidly based on hydrogen technology. Korea and Japan have similar roadmaps in a large framework. While Japan's main goal is to supply hydrogen vehicles and expand the domestic fuel cell system, Korea has announced a power generation goal using hydrogen fuel cells, but the detailed strategy is not very specific. Therefore, Korea should specifically establish such a detailed strategy plan and actively introduce the NIPP in hydrogen-related fields. In addition to justification of establishing an efficient hydrogen society and securing safety, the issues necessary for the promotion of the project are as follows.

First, Korea cannot make empirical plans simply by reducing carbon emissions and building an eco-friendly hydrogen city. Currently, the Korean government is taking the lead in establishing a hydrogen strategy. However, exchanges between countries are insufficient. A win-win strategy between countries utilizing international cooperation is needed.

Second, for the dissemination of policies related to safe use, utilization and storage of hydrogen, it is important to discover demand with potential stakeholders and to integrally check hydrogen-related infrastructure. Linkages between metropolitan governments to share information on promotion measures or regulatory systems for the supply of hydrogen energy are not sufficiently established in Korea. Therefore, it is necessary to organize a meeting where government officials and local government heads can gather to share opinions and share current issues.

Third, it is necessary to increase the credibility of policies related to hydrogen energy by considering social acceptability, and ensure that there is no obstacle in the implementation of the policies. To clarify what policies the people want for the promotion of a hydrogen society in the future, it is necessary to review and verify specific methods such as information provision. In order to improve people's awareness and understanding of hydrogen society and to reorganize hydrogen infrastructure, the social acceptance of the people is essential. Through NIPP, the reliability of hydrogen safety should be secured, and the safety management capability and autonomous safety culture of companies should be established.

5. References

5.1. Journal articles

[1] Jeon CW & Jeong UY & Cheung CS. A Comparative Study on NIPP and COOP. *Journal of the Society of Disaster Information*, 16(1), 192-202 (2020).

[2] Kwon SA & Ryu SI. Measures for Strengthening Performance of Disaster and Safety Management System at Local Government. *International Journal of Human & Disaster*, 4(1), 1-7 (2019). [Article]

[3] Lee GJ & Kang SH & KI KH & Cheung CS. A Basic Study on Activation for Enterprise Disaster Manager. *Journal of The Korean Society of Hazard Mitigation*, 16(4), 89-93 (2016).

[4] Lee HJ & Cheon WK & Lim WH. Human & Disaster: A Study of Prediction on the Species Number and Naturalization Index of Land Naturalized Plants. *International Journal of Human & Disaster*, 5(1), 10-23 (2020). [Article]
[9] Kim DM & Cheung CS. An Exploratory Study on the Designation of Disaster Management Resources. *The Journal of Korea Navigation Institute*, 23(5), 466-472 (2019).
[10] Lee JH. A Study on the Goal-setting of Financial Investment to Prepare the Natural Disaster in Korea. *International Journal of Human & Disaster*, 2(2), 4-7 (2017). [Article]
[11] Yun WS. Understanding Terrorism Aiming at Energy Infrastructures: How to Protect Korean Energy Infrastructures. *International Journal of Protection, Security & Investigation*, 4(2), 1-12 (2019). [Article]
[13] Choi C & Choi J. Development and Distribution of Risk Governance Framework in Terms of Socially Viable Solutions. *The Journal of Asian Finance, Economics and Business*, 5(3), 185-193 (2018).
[14] Samaddar S & Choi JH & Misra BA & Tatano H. Insights on Social Learning and Collaborative Action Plan Development for Flood Risks Mitigation: Practicing Yonmenkaigi System Method(YSM) in Hotspot Mumbai. *Natural Hazards*, 75(2), 1531-1554 (2014).
[15] Samaddar S & Okada N & Choi JH & Tatano H. What Constitutes Successful Participatory Disaster Risk Management? Insights from Post-earthquake Reconstruction Work in Rural Gujarat, India. *Natural Hazards,* 85(1), 111-138 (2017).
[16] Choi CI & Tatano H & Choi JH Development and Application of a Sense-making Approach to Community-based Disaster Risk Governance. *Journal of Asian Finance, Economics and Business*, 6(1), 289-301 (2019).
[17] Jung YS & Jo SG. The Islamic State's Terrorism and the Safety of Korea and Japan. *International Journal of Protection, Security & Investigation*, 4(1) 26-36 (2019). [Article]
[18] Kawasaki K & Katsuki H & Takahara I & Taniguchi M. Probability of Nimby Prolems in the Spead Process of FCV -From the Substance of Resident's Risk Perception-. *Journal of the City Planning Institute of Japan*, 51(3), 452-458 (2016).
[19] Cheung CS. Development of an Application for Life Safety Continuity Method based on National Point Numbers and NFC. *Journal of the Society of Disaster Information*, 15(2), 282-291 (2019).
[20] Rhee SS & Jung EY & Park JH & Cheung CS. A Study on Legal Status and Problem Improvement of the Enterprise Disaster Management Standard. *Journal of the Society of Disaster Information*, 14(2), 115-121 (2018).
[21] Cheung CS & Yoon DK & Kim TH. Comparative Analysis of Certification in Between Performance of Disaster Safety Technology and Business Continuity Management System(BCMS). *Journal of the Korean Society of Hazard Mitigation,* 15(5), 67-77 (2015).

5.2. Additional references

[5] Relevant Ministry. Hydrogen Economy Roadmap (2019).
[6] California Environmental Protection Agency. 2017 Annual Evaluation of Fuel Cell Electric Vehicle Deployment and Hydrogen Fuel Station Network Development. CaFCP (2017).
[7] Federal Ministry for Economic Affairs and Energy. The German National Hydrogen Strategy (2020).
[8] Stangarone T. South Korean Efforts to Transition to a Hydrogen Economy. Clean Technology Environment Policy (2020).
[12] Agency for Natural Resources and Energy. Hydrogen Fuel Cell Roadmap (2014).

6. Appendix

6.1. Authors contribution

	Initial name	Contribution
Lead Author	JC	-Set of concepts ☑ -Design ☑ -Getting results ☑ -Analysis ☑ -Make a significant contribution to collection ☑ -Final approval of the paper ☑
Corresponding Author*	CC	-Corresponding ☑ -Play a decisive role in modification ☑
Co-Author	DL	-Significant contributions to concepts, designs, practices, analysis and interpretation of data ☑ -Participants in Drafting and Revising Papers ☑ -Someone who can explain all aspects of the paper ☑

6.2. Funding agency

This Work is Financially Supported by Ministry of the Interior and Safety as 「Business Continuity Management(BCM) Human Resource Development Project」.

2021 6(1) 55-64
Submission: 2021/02/10, Peer review: 2021/02/20, Accepted: 2021/02/25, Published: 2021/03/30

International Journal of Human & Disaster

Publisher: J-INSTITUTE
ISSN: 2423-8260

Website: www.j-institute.jp/disaster/
Editor: disaster@j-institute.jp

Corresponding author
E-mail: parker@mokpo.ac.kr

dx.doi.org/10.22471
/disaster.2021.6.1.55

Analysis in Research PRODUCTIVITY in the Hospitality Area

Hyojin Kim[1]
Mokpo National University, Muan, Republic of Korea
Heungsik Park[2*]
Mokpo National University, Muan, Republic of Korea

Abstract

Purpose: *This study has the following three purposes. First, this study compares the results of research by Kim et al.(2013) with the results of this study and analyzes how much tourism and hospitality professionals have contributed to the academia since 2010. Second, this study analyzes the contribution of researchers according to their positions. Third, the targeted subjects of this study are English-written journals. This study analyzes whether the group of researchers who speak English as their mother language has a high contribution to English-speaking journals or whether the group of non-English-speaking researchers is high.*

Method: *This study carries out the analysis using the research methods of Sheldon(1991) and Kim et al.(2013). The journals for the analysis of research productivity for this study were selected as Journal of Travel Research, Cornell Hospitality Quarterly, and Journal of Hospitality and Tourism Research listed in the Social Science Citation Index(SSCI). Information on all research papers published from 2000 to 2015 was collected from the three journals, and analyses of authorship and research productivity were conducted.*

Results: *The results of the study are as follows. First, there is no big difference between the tourism and hospitality researchers in the contribution of the three journals over the period. However, it is evident that the degree of contribution of non-tourism and non-hospitality professionals to academic journals increased by about 5% over the five years from 2011 to 2015. Second, although there are somewhat differences by journals, it was analyzed that overall, the group of full professors showed higher productivity of research papers than the group of associate and assistant professors. Third, even though they are non-English-speaking researchers, non-English-speaking researchers consistently contribute to English-speaking journals.*

Conclusion: *Based on the results, this study comes to a conclusion that academic interactions between tourism and hospitality fields and other disciplines are increasing, so many topics that are able to be linked to other disciplines and tourism and hospitality fields should be discussed for academic development. Also, this study shows a contradiction that is the expectation that research productivity in the group of assistant professors is higher than other positions for reasons such as tenured position. Lastly, this study turns out that the productivity of non-English-speaking researchers is significant even in English-written journals.*

***[Keywords]* Research, Productivity, Hospitality, Authorship, Journals**

1. Introduction

Over the past few decades, both departments and programs in colleges related to tourism and hospitality have been newly established not only in Korea but also abroad[1]. Many departments relating to the tourism and hospitality sector exist in Korea, and the related departments are operated in more than 200 schools in the United States[2]. Under the constant and enormous interest of tourism and hospitality, it has been about 70 years since the establishment of related departments. English academic journals listed in SSCI(Social Science

Citation Index) were only a few of them in the tourism and hospitality field as well as newly established departments related to tourism and hospitality. As of August 2015, the number of English academic journals has increased to 18 journals. In this way, with the increase in the quantity of tourism and hospitality programs, the definition and concept of tourism and hospitality, the identity, topology, tradition, history, directions, and future research of the academic field are being discussed in several journals and references[3][4][5][6][7][8][9]. In particular, researchers in the tourism and hospitality have developed a conceptual definition, academic significance, and original theory of tourism and hospitality as a social science through a cross-disciplinary and multidisciplinary approach and have put considerable efforts to establish their own research methodology[10][11][12][13][14][15][16][17][18][19].

In spite of the continued and dedicated enthusiasm of hospitality and tourism professionals, very little research has been conducted on how much quantitative or qualitative development has been made in the field over the past decades. Particularly, as an example of quantitative development, there are few studies that answer the question of how much progress has been made in research productivity in the fields. There are several studies pertaining to research productivity including studies by Sheldon(1991) and Kim et al.(2013)[20][21]. Kim et al.(2013) argued that it is necessary to analyze how much non-tourism and hospitality researchers contribute to the fields associated with tourism and hospitality. Additionally, although there are various factors that determine the research productivity of scholars in their research, they suggested that the number of research papers published in academic journals is the most reliable clue that is able to decide research productivity[22][23][24][25][26][27][28][29]. Moreover, they emphasized that it is significant to analyze whether there is a difference in research productivity between the groups of full professors, associate professors, and assistant professors in the field of tourism and hospitality. As a comparable study, research productivity in the study of Sheldon(1991) was analyzed for 10 years between 1980 and 1989 according to the position of the researcher in three specialized journals. As a result, the higher position, the more productive in the area. It has been for decades since the study of Sheldon(1991) and has been for about 10 years since the study of Kim et al.(2013). It is, however, important to identify whether it is similar to the results of research productivity that have been determined by Sheldon(1991) and Kim et al. from that time at this point.

This study, therefore, has the following three purposes. First, this study compares the results of research by Kim et al.(2013) with the results of this study and analyzes how much tourism and hospitality professionals have contributed to the academia since 2010. This analysis applies the research methods of Sheldon(1991) and Kim et al.(2013). Second, this study analyzes the contribution of researchers according to their positions. In academic institutions, there are positions such as assistant, associate, and full professors. Other than academic institutions, there are positions of their own such as president and manager. The study analyzes whether there is a difference in research productivity according to position. Third, the targeted subjects of this study are English-written journals. This study analyzes whether the group of researchers who speak English as their mother language has a high contribution to English-speaking journals or whether the group of non-English-speaking researchers is high. This study anticipates in providing a few directions for academia of tourism and hospitality which has been about 70 years old through multilateral analyses of research productivity and contribution.

2. Research Methods

This study carries out the analysis using the research methods of Sheldon(1991) and Kim et al.(2013). There are several ways to analyze the research productivity of a researcher, but the number of research papers submitted and published in academic journals is regarded as research productivity in this study[22][23][24][25][26][27][28][29][30]. There are evidences as research productivity that include reports, books, and commentaries, however, the number of research papers is limited in the study for convenience of analysis. The journals for the analysis of research productivity for this study were selected as *Journal of Travel Research*, *Cornell Hospitality Quarterly*, and *Journal of Hospitality and Tourism Research* listed in the Social Science Citation Index(SSCI). The study by Kim et al.(2013) included *Annals of Tourism Research* in addition to the three journals chosen from this study, but many missing values of author information were found in the journal. The journal, therefore, was excluded from this study. Compared to other journals, *Journal of Travel Research*, *Cornell Hospitality Quarterly*, and *Journal of Hospitality and Tourism Research* have relatively been listed in the SSCI long time ago and become representative journals in the field of tourism and hospitality. Also, because the three journals contain detailed information of the researcher such as the researcher's position and affiliation, it is easy for authorship analysis. Therefore, *Journal of Travel Research*, *Cornell Hospitality Quarterly*, and *Journal of Hospitality and Tourism Research* were singled out for this study. Information on all research papers published from 2000 to 2015 was collected from the three journals, and analyses of authorship and research productivity were conducted. As of August 2015, there were 18 journals in tourism and hospitality registered in the SSCI. Compared with the study of Kim et al.(2013), two more journals like *Journal of Tourism and Cultural Change* and *Tourist Studies* were added.

Most research articles published in the three journals provide basic information about author, whereas such information is not provided in some cases. If there is no author information in research paper, individual author information was found and analyzed using Google Scholar. Also, an issue to be considered in analyzing research productivity is the analysis of the contribution of co-researchers per one research paper. It is no doubt that since each researcher's contribution to a research paper is different in conducting research, it is reasonable to be given different weights. However, since it is not possible to accurately measure the degree to which each author contributes to a research paper, in this study, rather than applying different weights to each researcher, the same weight was applied to analyze it. All authors included in a research paper, thus, were considered equally as one author of a research paper regardless of the order of authors.

Table 1. Biographical information released by 18 SSCI journals.

18 SSCI Journals as of august, 2015	Presence(X) or absence(√)		
	Position	Affiliation	Country
1. Annals of tourism research	X	X	X
2. Journal of travel research	X	X	X
3. Cornell hospitality quarterly	X	X	X
4. Journal of hospitality and tourism research	X	X	X
5. Tourism management	√	X	X
6. Tourism geographies	X	X	X
7. Tourism economics	√	X	X
8. Journal of sustainable tourism	√	X	X
9. International journal of hospitality management	√	X	X
10. International journal of tourism research	√	X	X
11. Asia pacific journal of tourism research	√	X	X
12. Current issues in tourism	√	X	X
13. Journal of travel & tourism marketing	X	X	X
14. Scandinavian journal of hospitality and tourism	√	X	X
15. International journal of contemporary hospitality management	X	X	X

16. Journal of hospitality leisure sport & tourism education	X	X	X
17. Journal of tourism and cultural change	√	X	X
18. Tourist studies	X	X	X

3. Results

<Table 2>, <Table 3> show the academic contribution of professionals in tourism and hospitality from 2000 through 2010 and from 2011 through 2015 for the three selected journals. In Table 2, of the total 2,474 contributors of the three journals from 2000 to 2010, 1,313 researchers(53.07%) are professionals in the tourism and hospitality sector, and the remaining 816 researchers(32.86%) are professionals in non-tourism and non-hospitality fields such as business, economics, and geography. On the other hand, out of a total of 1,391 researchers in the three academic journals for five years from 2011 to 2015 in <Table 3>, the number of 743(53.41%) were experts in the tourism and hospitality area. The remaining 519 researchers(37.31%) were professionals in the field of non-tourism and non-hospitality. Like the results from 2000 to 2010, the results from 2011 to 2015 also showed that researchers in the tourism and hospitality fields contributed higher than those in the non-fields to the three academic journals.

As shown in the results of <Table 2>, <Table 3>, there is no big difference between the tourism and hospitality researchers in the contribution of the three journals over the period. However, it is evident that the degree of contribution of non-tourism and non-hospitality professionals to academic journals increased by about 5% over the five years from 2011 to 2015. These results are evidence that interdisciplinary exchanges with non-tourism and non-hospitality professionals continue to increase in the tourism and hospitality sector.

Table 2. Comparison of level of contribution to the three journals(2000~2010).

Group	JTR (%)	CHQ (%)	JHTR (%)	Total (%)
TH professionals	435	451	427	1,313
	42.69%	52.56%	71.52%	53.07%
Non-TH professionals	424	247	142	813
	41.61%	28.79%	23.79%	32.86%
No information	160	160	28	348
	15.70%	18.65%	4.69%	14.07%
Total	1,019	858	597	2,474
	100%	100%	100%	100%

Note: JTR, CHQ, and JHTR denote *Journal of Travel Research*, *Cornell Hospitality Quarterly*, and *Journal of Hospitality and Tourism Research*, respectively.

Table 3. Comparison of level of contribution to the three journals(2011~2015).

Group	JTR (%)	CHQ (%)	JHTR (%)	Total (%)
TH professionals	332	212	199	743
	49.33%	47.32%	73.70%	53.41%
Non-TH professionals	278	174	67	519
	41.31%	38.84%	24.81%	37.31%
No information	63	62	4	129
	9.36%	13.84%	1.48%	9.27%
Total	673	448	270	1,391
	100%	100%	100%	100%

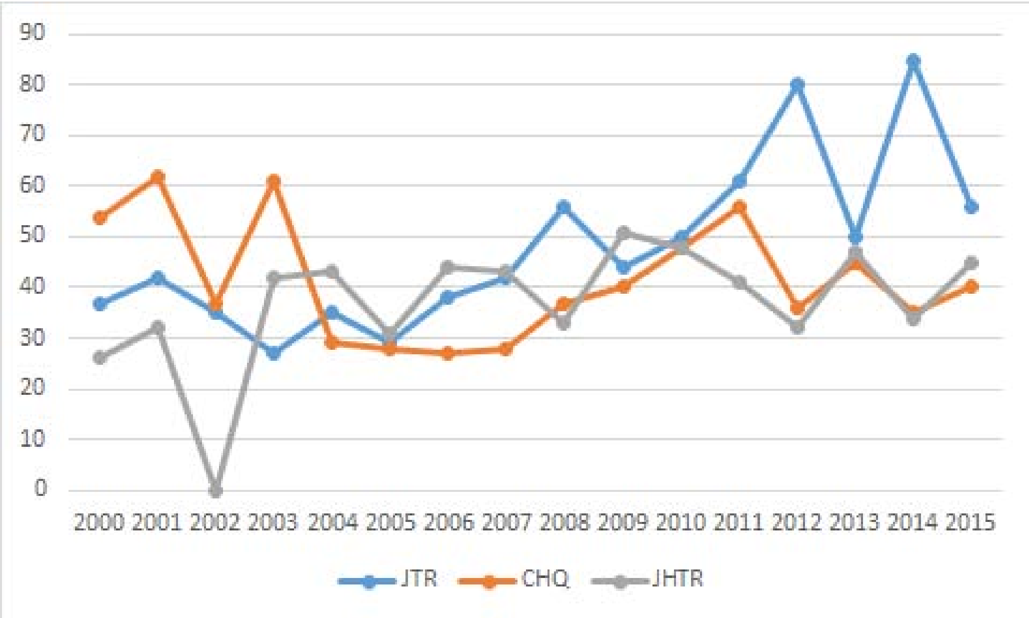
Note: JTR, CHQ, and JHTR denote *Journal of Travel Research*, *Cornell Hospitality Quarterly*, and *Journal of Hospitality and Tourism Research*, respectively.

<Table 4> shows the ratio of researchers in the tourism and hospitality to the total researchers in the three academic journals by year from 2000 to 2015. Data for five years from 2011 to 2015 were added to the results from 2000 to 2010 conducted in the study of Kim et al.(2013). Additionally, <Figure 1> shows the contribution of three journals by researchers in the tourism and hospitality field over the 15 years from 2000 to 2015. In all three journals, the degree of contribution of researchers in the tourism and hospitality sectors has increased overall but has repeatedly continued to increase and decrease since 2011.

Table 4. Tourism and hospitality professionals over total professionals by year(2000~2015).

Journal	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
JTR	37/73	42/95	35/71	27/82	35/104	29/90	38/112	42/110	56/96	44/93	50/93	61/127	80/144	50/123	85/151	56/128	767/1692
CHQ	54/104	62/111	37/101	61/115	29/51	28/59	27/58	28/59	37/62	40/77	48/61	56/102	36/88	45/82	35/85	40/91	663/1306
JHTR	26/47	32/48	34/42	42/54	43/61	31/49	44/62	43/60	33/46	51/69	48/59	41/57	32/45	47/57	34/55	45/56	592/867
Total	117/224	136/254	72/214	130/251	107/216	88/198	109/232	113/229	126/204	135/239	146/213	158/286	148/277	142/262	154/291	141/275	2022/3865

Figure 1. Contribution trend of tourism and hospitality group(2000~2015).



<Table 5> shows the research productivity of each position according to the three journals from 2000 to 2010. Likewise, <Table 6> presents the research productivity of the three journals from 2011 to 2015. As a result, in <Table 5>, <Table 6>, the group of full professors as a whole shows higher research productivity than the group of associate professors, assistant professors, students, and other researchers. In particular, as shown in <Table 6>, in terms of research productivity from 2011 to 2015, the group of full professor ranked 26.87%, others 21.91%, the group of assistant professor 20.76%, and the group of associate professor 18.03%. These results show a bit differences in ranking among groups, but they show similar patterns to the results of the authorship analysis by Sheldon(1991) and Kim et al.(2013).

From the results of each journal in <Table 6>, in the *Journal of Travel Research*, the group of full professors was the highest with 28.18%, followed by the group of assistant professors with 15.75%, and followed by the group of associate professors with 14.74%. In the *Cornell Hospitality Quarterly*, the group of full professors was the highest with 28.60%, the group of associate professors 24.19%, and the group of assistant professors 21.16%. Finally, in the

Journal of Hospitality and Tourism Research, the group of assistant professors was 32.96%, the group of full professors 20.74%, and the group of associate professors 16.67% in the order of research productivity. Although there are somewhat differences by journals, it was analyzed that overall, the group of full professors showed higher productivity of research papers than the group of associate and assistant professors.

Table 5. Level of contribution according to academic position(2000~2010).

Group	JTR (%)	CHQ (%)	JHTR (%)	Total (%)
Full professors	287	214	114	615
	28.16%	24.94%	19.10%	24.86%
Associate professors	150	198	130	478
	14.72%	23.08%	21.78%	19.32%
Assistant professors	180	164	169	513
	17.66%	19.11%	28.31%	20.74%
Students	77	77	58	212
	7.56%	8.97%	9.72%	8.57%
Others	290	198	120	608
	28.46%	23.08%	20.10%	24.58%
No information	35	7	6	48
	3.43%	0.82%	1.01%	1.94%
Total	1,019	858	597	2,474
	100%	100%	100%	100%

Notes: Students include doctoral candidates and masters; others includes adjunct professors, industrial professionals(directors, managers, and analysts), post-doctorates, visiting scholars, and research fellows and assistants.

Table 6. Level of contribution according to academic position(2011~2015).

Group	JTR (%)	CHQ (%)	JHTR (%)	Total (%)
Full professors	195	123	56	374
	28.18%	28.60%	20.74%	26.87%
Associate professors	102	104	45	251
	14.74%	24.19%	16.67%	18.03%
Assistant professors	109	91	89	289
	15.75%	21.16%	32.96%	20.76%
Students	66	25	33	124
	9.54%	5.81%	12.22%	8.91%
Others	203	57	45	305
	29.34%	13.26%	16.67%	21.91%
No information	17	30	2	49
	2.46%	6.98%	0.74%	3.52%
Total	692	430	270	1,392
	100%	100%	100%	100%

Notes: Students include doctoral candidates and masters; others includes adjunct professors, industrial professionals(directors, managers, and analysts), post-doctorates, visiting scholars, and research fellows and assistants.

The three selected journals are academic journals published in English in the field of tourism and hospitality. In the three journals published in English, the study analyzed the contribution of non-English-speaking researchers to the three journals. As a result, the majority of researchers were English-speaking professionals overall. From 2000 to 2010, of the total, more than 78% of English-speaking researchers were presented. From 2011 to 2015, more than 72% of English-speaking researchers were shown. However, compared <Table 7> with <Table 8>, it was found that the ratio of non-English-speaking researchers increased by about 7% between 2000-2010 and 2011-2015. These results show that even though they are non-English-speaking researchers, non-English-speaking researchers consistently contribute to English-speaking journals. Particularly, in the *Cornell Hospitality Quarterly*, the proportion of non-English-speaking researchers has increased considerably from 10.72% to 28.07%, showing that the efforts of non-English-speaking researchers continue to be reflected internationally, even though English is not the first language.

Table 7. Contribution of English and non-English speaking professionals(2000~2010).

Group	JTR (%)	CHQ (%)	JHTR (%)	Total (%)
ES professionals	740	753	443	1,936
	72.62%	87.76%	74.20%	78.25%
Non-ES professionals	265	92	154	511
	26.01%	10.72%	25.80%	20.65%
No information	14	13	0	27
	1.37%	1.52%	0.00%	1.09%
Total	1,019	858	597	2,474
	100%	100%	100%	100%

Table 8. Contribution of English and non-English speaking professionals(2011~2015).

Group	JTR (%)	CHQ (%)	JHTR (%)	Total (%)
ES professionals	506	307	197	1,010
	72.39%	71.23%	72.96%	72.14%
Non-ES professionals	193	121	71	385
	27.61%	28.07%	26.30%	27.50%
No information	0	3	2	5
	0.00%	0.70%	0.74%	0.36%
Total	699	431	270	1,400
	100%	100%	100%	100%

4. Conclusions and Discussion

This study is not only a comparative analysis with the research results of Kim et al.(2013), but also the academic contribution of tourism and hospitality by researchers in the field of tourism and hospitality since 2010. Also, the study analyzed whether there is a difference in research productivity according to positions of professionals and how much non-English-speaking researchers contribute to the three English-speaking journals. Based on the results, the conclusions are as follows.

First, as in the results from Kim et al.(2013), researchers in the tourism and hospitality fields showed a higher degree of contribution than those in the non-tourism and non-hospitality fields in the three journals. It is unambiguous that even though many researchers in the tourism and hospitality considerably contribute to the journals because of the journal titles with the terms of both tourism and hospitality, the number of papers from the non-tourism and non-hospitality researchers continue to increase. These results show that academic interactions between tourism and hospitality fields and other disciplines are increasing, so many topics that are able to be linked to other disciplines and tourism and hospitality fields should be discussed for academic development[10][11]. Additionally, these implications are a direction that can be presented to the *International Journal of Human & Disaster*, which is an emerging academic journal and deals with an integrated social science field.

Second, in all three journals, the research productivity of the group of full professors was higher than that of the group of associate and assistant professors. As argued by Sheldon(1991) and Kim et al.(2013), it was also confirmed that the research productivity of the group of full professors was the highest from 2011 to 2015 in the *Journal of Travel Research* and *Cornell Hospitality Quarterly*. As mentioned in the study of Kim et al.(2013), the results of this study are contrary to the expectation that research productivity in the group of assistant professors is higher than other positions for reasons such as tenured position. Although each professional journal has its own characteristics, a more detailed analysis from the results of the study is needed.

In the last, although the three journals selected were English-speaking journals, the study analyzed how much English-speaking and non-English-speaking researchers contributed to the academia. All three journals were analyzed that the majority of researchers were English-speaking researchers. However, as mentioned in the results, it was found that non-English-speaking researchers accounted for 27.50% of the total researchers between 2011 and 2015, which turns out that the productivity of non-English-speaking researchers is significant even in English-written journals. When evaluating research achievements from a professor in Korea, the evaluation scores of papers published in domestic and international journals are differently set. For this reason, additional analysis is needed to determine whether an effort is made to contribute to international English journals.

This study has the following limitations. First, despite the existence of several academic journals in the fields of tourism and hospitality, this study conducted analyses of research productivity for only three academic journals. It looks forward to that the reliability and validity of the results will be secured if the same analyses of research productivity are performed not only on three journals in future research, but also on several journals in the field of tourism and hospitality. Furthermore, it anticipates in that meaningful implications for research productivity will be drawn if the comparison of journals in the fields of tourism and hospitality as well as in other academic fields is carried out. Second, this study was conducted based on data from 2000 to 2015. It is expected that higher reliability of the results will be secured if longitudinal studies on research productivity for more than 20 years in subsequent studies are conducted. Finally, only a simple analysis between research productivity and researchers in this study was performed because of restrictions on author information provided by the journals. In the follow-up study, it will be a helpful study if research productivity is analyzed with various information of researchers such as age, years of service, and gender using Internet search engines and multiple social network services.

5. References

5.1. Journal articles

[3] Dann G & Nash D & Pearce P. Methodology in Tourism Research. *Annals of Tourism Research*, 15(1), 1-28 (1988).

[4] Dundar H & Lewis D. Determinants of Research Productivity in Higher Education. *Research in Higher Education*, 39(6), 607-631 (1998).

[5] Leiper N. An Emerging Discipline. *Annals of Tourism Research*, 27(3), 805-809 (2000).

[6] Tribe J. The Indiscipline of Tourism. *Annals of Tourism Research*, 24(3), 638-657 (1997).

[7] Tribe J. Indisciplined and Unsubstantiated. *Annals of Tourism Research*, 27(3), 809-813 (2000).

[10] Baird L. Publication Productivity in Doctoral Research Departments: Interdisciplinary and Intra-disciplinary Factors. *Research in Higher Education*, 32(3), 303-318 (1991).

[11] Bentley R & Blackburn R. Changes in Academic Research Performance Over Time: A Study of Institutional Accumulative Advantage. *Research in Higher Education*, 31(4), 327-353 (1990).
[12] Jafari J & Ritchie B. Toward a Framework for Tourism Education: Problems and Prospects. *Annals of Tourism Research*, 8(1), 13-34 (1981).
[13] Jeon K & Park S. Analysis of Domestic Research Trend in Self-leadership Found among Nursing Students in Republic of Korea. *International Journal of Crisis & Safety*, 3(4), 1-9 (2018). [Article]
[14] Kim JS & Lim KW & Hwang YY. Research Trend of Sport Nutrition Science in the Republic of Korea. *International Journal of Sport*, 1(1), 1-7 (2016). [Article]
[15] Leiper N. Towards a Cohesive Curriculum Tourism: The Case for a Distinct Discipline. *Annals of Tourism Research*, 8(1), 69-84 (1981).
[16] Nam JS & Jo SG. A Study on Canada's Response Systems for Terrorism and Emerging Trends. *International Journal of Terrorism & National Security*, 5(1), 13-24 (2020). [Article]
[17] Oh HK & Choi SK. Trend in and Strategic Implementation Plan for the International Development Cooperation through Sports. *International Journal of Sport*, 3(2), 16-25 (2018). [Article]
[18] Yang SD & Lee KM. Review of Trend Analysis of Terrorism and Korea's Implications. *International Journal of Terrorism & National Security*, 5(1), 40-47 (2020). [Article]
[20] Sheldon PJ. An Authorship Analysis of Tourism Research. *Annals of Tourism Research*, 18(3), 473-484 (1991).
[21] Kim H & Choi H & Lee H. Research Productivity of Academic Professionals in Tourism and Hospitality. *Journal of Tourism and Hospitality*, 1(2), 67-74 (2013).
[22] Feldman K. Research Productivity and Scholarly Accomplishment of College Teachers as Related to Their Instructional Effectiveness: A Review and Exploration. *Research in Higher Education*, 26(3), 227-298 (1987).
[23] Echtner CM & Jamal TB. The Disciplinary Dilemma of Tourism Studies. *Annals of Tourism Research*, 24(4), 868-883 (1997).
[24] Jordan JM & Meador M & Walters SJK. Effects of Department Size and Organization on the Research Productivity of Academic Economists. *Economics of Education Review*, 7(2), 251-255 (1988).
[25] Levin S & Stephan P. Age and Research Productivity of Academic Scientists. *Research in Higher Education*, 30(5), 531-549 (1989).
[26] Miller JC & Tollison RD. Rates of Publication per Faculty Member in Forty-five Rated Economics Departments. *Economic Inquiry*, 13(1), 122-123 (1975).
[27] Tien FF & Blackburn RT. Faculty Rank System, Research Motivation, and Faculty Research Productivity: Measure Refinement and Theory Testing. *The Journal of Higher Education*, 67(1), 2-22 (1996).
[28] Toutkoushian R & Porter S & Danielson C & Hollis P. Using Publications Counts to Measure an Institution's Research Productivity. *Research in Higher Education*, 44(2), 121-148 (2003).
[29] Wanner RA & Lewis LS & Gregorio DI. Research Productivity in Academia: A Comparative Study of the Sciences, Social Sciences and Humanities. *Sociology of Education*, 54(4), 238-253 (1981).

5.2. Books

[1] Pearce PL & Rutledge JL & Morrison AM. Tourism: Bridges Across Continents. McGraw-hill (1998).
[8] Goeldner CR & Ritchie JRB. Tourism: Principles, Practices, Philosophies. Hoboken. Wiley (2003).
[9] Pearce DG & Butler RW. Tourism Research: Critiques and Challenges. Routledge (1993).
[19] Smith VL & Brent M. Hosts and Guests Revisited: Tourism Issues of the 21st Century. Cognizant Communication Corp (2001).
[30] Creswell JW. Measuring Faculty Research Performance. San Francisco: Jossey-bass (1986).

5.3. Additional references

[2] http://www.hospitalityschools.com/ (2012).

6. Appendix

6.1. Authors contribution

	Initial name	Contribution
Lead Author	HK	-Set of concepts ☑ -Design ☑ -Getting results ☑ -Analysis ☑ -Make a significant contribution to collection ☑ -Final approval of the paper ☑
Corresponding Author*	HP	-Corresponding ☑ -Play a decisive role in modification ☑ -Significant contributions to concepts, designs, practices, analysis and interpretation of data ☑ -Participants in Drafting and Revising Papers ☑ -Someone who can explain all aspects of the paper ☑

6.2. Funding agency

This Research was supported by Research Funds of Mokpo National University in 2020.