

Comparison between Transition Year in Ireland vs. Self-Direction Learning Semester in Korea through Online News Data Analysis

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Abstract

Background/Objectives: This study was aimed to derive directions and implications of self-directed learning semester policy by comparing similarities and differences between self-directed learning semester policy in Korea and transition year policy in Ireland and highlighting experiences of the transition year policy. **Methods/Statistical Analysis:** For this study, related news data online about Ireland's Transition Year and Korea's Self-Directed Learning Semester were collected by using JAVA. As data for the entire study, the news articles generated in Naver from Jan 1, 2012, which was the previous year before Korea's Self-Directed Learning Semester was demonstrated to Mar 6, 2016 for a total of 1556 days, were used. To calculate the frequency of words after removing the overlapped articles of news data collected from Naver, R package. **Findings:** In This study searched and collected (crawling) the articles from Naver on Transition Year, a role model for Self-Directed Learning Semester and Self-Directed Learning Semester to be enacted from 2016 and analyzed similarities and differences. Year, education, career path, self-directed learning, semester system, and experience were drawn as an important factor. Regarding Self-Directed Learning Semester, education, self-directed learning, semester system, career, and experience were drawn as important factors. Commonly in both Transition Year and Self-Directed Learning Semester, education, self-directed learning, semester system, career, and experience were drawn as important factors. Government's policy towards Self-Directed Learning Semester is a good intention, but more positive supports are necessary at the government level for producing various programs and activities so that the Self-Directed Learning Semester can be well resettled and activated. **Application/Improvements:** This study compared similarities and differences between Self-Directed Learning Semester of Korea and Transition Year of Ireland based on online news articles and drew implications for the Self-Directed Learning Semester policy in light of Transition Year.

Keywords: Big Data, R, Self-Direction Learning Semester, Text Mining, Transition Year

1. Introduction

With the introduction of the Self-Directed Learning Semester, Park Geunhye Government's core government

project in 2016, it is important to make a comparative analysis of Transition Year of Ireland and Self-Directed Learning Semester of Korea through online news articles and explore a successful operation of the Self-Directed

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Learning Semester. Korea's Self-Directed Learning Semester supports experience-oriented learning and career education. Job related career experience provides job site visit and information on occupations so that students can seek their jobs to their aptitude carefully and establish their own plans about jobs and career¹. The purpose of Self-Directed Learning Semester is to operate various experience-oriented activities including discussion of the general affairs of school education, practice, and project performance in addition to job experience and implement a happy education².

However, the Self-Directed Learning Semester is structural unlike the existing nature of public education and supports a fundamental educational reform, which may cause debate in making an educational decision³. The Self-Directed Learning Semester to be enacted in Korea in 2016 has still many problems although it modeled Ireland's Transition Year. A question arises: will it be possible for students to achieve their goals as much as they wanted by discovering their talents and dreams and cultivating their capabilities necessary for our future society during just one semester⁴. Operational difficulties are expected due to lack of infrastructure to support career education, lack of social consensus on the Self-Directed Learning Semester, and ambiguity in the role of teacher, subject of operation. Therefore, specific measures should be presented so that the Self-Directed Learning Semester can achieve its original intention that students have an ability to discover their talents and dreams by themselves and the policy can provide them with opportunities to reflect on and develop themselves continuously through exploration of their talent and future⁵. Accordingly, this study aimed to compare similarities and differences between Korea's Self-Directed Learning Semester and Ireland's Transition Year through online news articles and draw implications for the Self-Directed Learning Semester in light of Transition Year. The specific content of this study is a comparative analysis of Ireland's Transition Year and Korea's Self-Directed Learning Semester. For this study, related news data online about Ireland's Transition Year and Korea's Self-Directed Learning Semester were collected by using JAVA. To extract nouns from the news articles data collected, big data analysis was conducted by using R package. So this study aims to identify the contexts and factors for a successful operation of Ireland's

Transition Year and Korea's Self-Directed Learning Semester and draw directions and challenges involved.

2. Theoretical Backgrounds

2.1 Ireland's Transition Year

Transition Year (TY) is a school education curriculum during one (1) year from the end of Junior Certificate (JC), which corresponds to our middle school course, in second level courses (5~6 years) to before entrance to Senior Cycle (SC), which corresponds to our high school course. With the start of actual support for schools and teachers and government's financial support after 1994, Transition Year participation rate increased rapidly⁶ and from the mid 1990s, most of the middle schools in Ireland provided students with Transition Year. Students can enhance their academic ability by developing their self-centered learning ability through this and mature by inspiring personal and social abilities and various capabilities. However, Transition Year was divided into students who spend five (5) years and those who spend six (6) years for completing the middle school curriculum because it was mostly a selective program. The Self-Directed Learning Semester to be implemented in Korea in 2016 modelled this Transition Year and is a system that operates educational curriculum flexibly so that students can participate in various experience activities by making classes student participation-oriented including discussion, experiment, and practice with the intent of providing students with opportunities to explore their career path by discovering their talents and dreams getting out of the burdens of test or entrance examination during one semester in middle school educational curriculum⁷.

The purpose of Transition Year can be largely divided into three categories. First, it aims to develop practical abilities necessary for the society including communication skills, self-confidence, and responsibility and become mature morally and socially. Second, it is to achieve an academic maturity through multidisciplinary and self-initiated learning. Third, it is to become mature in career path and job capabilities through experience of adult society and professional life^{8,9}. Transition Year programs are organized autonomously and every school has its Transition Year Guidelines to their students' character-

istics and school culture and tradition. Such diversity sometimes gives rise to flaws. For example, important factors including academic approach or appropriate evaluation system are sometimes omitted¹⁰.

2.2 Korea's Self-Direction Learning Semester

The Self-Directed Learning Semester is a system that operates educational curriculum flexibly so that students can experience various activities including career exploration by making classes student participation-oriented, for example, discussion and practice during one semester in middle school curriculum getting out of the burdens of tests including midterm exam and final examination⁷. The Self-Directed Learning Semester, being under way by the current government, is deemed as an aggressive educational reform that might bring about structural changes in educational curriculum and that supports experience-centeredness beyond classrooms targeting only one graders¹¹. The reason why the Self-Directed Learning Semester is required in Korea the most lies in the reality of education of not respecting student's aptitude or talent.

OECD PISA showed that educational performance among Korean students ranked 2nd among 36 OECD countries, whereas ranked 16th, among the same countries¹². In addition to that, there are many other problems such as gradually increasing school violence, patterns of repeated, grouped, and secretive school violence, rapid increase of suicide rate among teenagers, and high identity disorder and low opportunities to seek career path. This is a big barrier to fostering creative, happy, and self-directed talents who will lead the future of Korea. This is why the Self-Directed Learning Semester is needed as a core policy at the national level.

The characteristics of the Self-Directed Learning Semester can be largely divided into the following three categories. First, it expanded the opportunities to explore

career path systematically. To enhance student's ability for career development, it reflected achievement standards and indicators in school career education as a basic curriculum into the contents of education and activated the operation of integrated career education. Second, it provides opportunities, for example, provision of portfolio for career exploration, which is used to record, manage, and provide the whole activities of career exploration systematically centering on the self-directed learning semester for activating student's opportunities by allowing them to experience their talents and aptitude directly⁷. Third, it develops and provides consumer-centered selective programs and develops, collects, and uses new programs to cause student's interests through various routes⁷. The Self-Directed Learning Semester was first demonstrated in 2013 by 42 schools. Students, teachers, and parents think it positively, but the classes during the Self-Directed Learning Semester, being applied and enacted in research schools, simply remain creative experience activities. Besides, there is another opinion that the Self-Directed Learning Semester is a curriculum to encourage junior students to take more interest in school learning in preparation for higher grader's curriculum. More systematic and practical measures should be presented by subject according to the educational system of Korea, by modelling Ireland's Transition Year. Accordingly, this author aims to identify what differences Ireland's Transition Year and Korea's Self-Directed Learning Semester have by collecting and analyzing relevant news articles.

3. Research Methods

This study conducted a text mining analysis of news articles with Ireland's 'Transition Year' and Korea's 'Self-Directed Learning Semester', generated in Naver, Korea's portal site, contained as a title and made a comparative study of similarities and differences between the two systems. Figure 1 shows research analysis process.

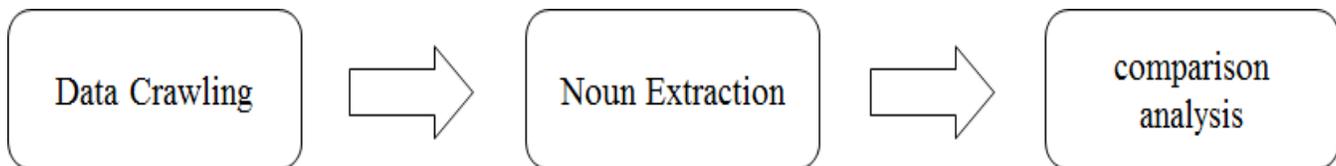


Figure 1. Analysis Process.

4. Research Methods

4.1 News Data

News articles related data for this study were collected by using JAVA. As data for the entire study, the news articles generated in Never from Jan 1, 2012, which was the previous year before Korea's Self-Directed Learning Semester was demonstrated to Mar 6, 2016 for a total of 1556 days, were used. For collecting news articles, Ireland's 'Transition Year' and Korea's 'Self-Directed Learning Semester' were set as title for each and the articles with such titles contained were extracted. The articles with such titles not contained were not included. A total of 32,042 articles were collected (Table 1).

The amount of 'Transition Year' and 'Self-Directed Learning Semester' related online news articles collected. The amount of articles collected for 2016 is relatively small because the articles collected until Mar 6, 2016 were used for analysis. The amount of articles is seen gradually increasing from 2012. The Transition Year related news articles increased in 2015 by 119 cases more than in 2014 and the Self-Directed Learning Semester related news articles increased by 10,877 cases. Both the systems are seen to have increased more than twice in the amount of articles.

4.2 News Data Noun Extraction

To calculate the frequency of words after removing the overlapped articles of news data collected from Naver, R package was used. Figure 2 and Figure 3 below show the nouns that belong to from Rank 1 with the highest frequency to Rank 30 by year from 2012 to Mar, 2016. The data for 2016 is relatively small in mentioning keywords because the data collected were the articles uploaded in Naver until Mar 6 of the same year.

4.2.1 News Data Noun Extraction

Figure 2 shows keywords mentioned in Self-Directed Learning Semester related articles by year. It can be seen that in 2012, the majority was mentioning about President Park Geunhye and half-college-tuition policy was a topic in light of 'tuition', 'half-price', and 'income'. In 2013, the keyword of Self-Directed Learning Semester' began to be mentioned and the Self-Directed Learning Semester related keywords such as operation of career experience, 'semester', and 'classes', began to appear newly. In 2014, similar keywords to those appeared in 2013 were mentioned a lot and additionally such keywords as 'educational superintendent', 'mobile', and 'happiness' were mentioned a lot. In 2015, such keywords as 'promotion', 'enforcement', and 'implementation' were mentioned a lot.

Table 1. Data collection of news data

Category	Description						
Channel	NAVER News						
Conditions	1. Ireland's Transition Year 2. Korea's Self-Direction Learning Semester						
Total News Articles Found		2012	2013	2014	2015	2016.03.06	Total
	Transition Year	14	79	89	208	26	416
	Self-Direction Learning	207	2,710	7,090	17,967	3,652	31,626
Period	2012-01-01 00:00:00 ~ 2016-03-06 23:59:59 (Total 1556)						



Figure 2. Self-Direction Learning Semester 2012 vs. 2016.

This suggests that there were a lot of articles on the implementation of Self-Directed Learning Semester. Finally in 2016, keyword ‘program’ was mentioned a lot, which suggests that the Self-Directed Learning Semester actually began to be operated. Besides, such keywords as ‘diversity’, ‘parents’, and ‘family’ were mentioned a lot.

In 2012, there were more news articles on economy than on Self-Directed Learning Semester. From 2013, the keyword of Self-Directed Learning Semester Career Experience Operation began to be mentioned a lot. In 2015, there were many Self-Directed Learning Semester

implementation related articles. In 2016, there were many keywords such as ‘diversity’ and ‘expansion’ on the Self-Directed Learning Semester implemented nationally this year, which suggests that Self-Directed Learning Semester has expanded at the national level variously. And in light of human related keywords such as ‘teacher’, ‘parent’, and ‘teenager’, it is seen that there is a high interest of teachers in Self-Directed Learning Semester.

4.2.2 Transition Year

Figure 3 below shows keywords mentioned in Transition

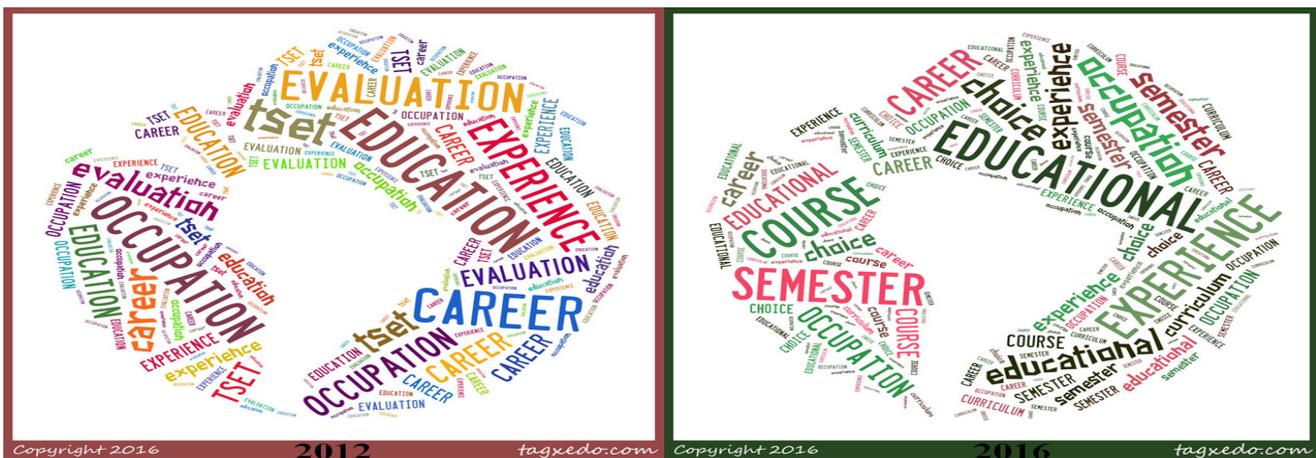


Figure 3. Transition Year 2012 vs. 2016.

Year related articles by year. In 2012, human keywords such as 'student', 'children', and 'teenager' were mentioned a lot and negative keywords such as 'problem' and 'anxiety' were mentioned a lot. Like 'Self-Directed Learning Semester' related articles, such keywords as 'Self-Directed Learning Semester' and 'career education' were mentioned a lot in 2013 and the keyword of 'test' diminished. In 2014, there were many 'program' related keywords, which suggests that there are many specific 'program' related articles. As person noun, keyword 'teacher' was mentioned a lot and keyword 'nature' appeared. In 2015, as person noun, 'parent' was mentioned a lot and 'leadership' appeared. In 2016, 'teacher' was mentioned a lot again and such keywords as 'guidance', 'England', and 'Denmark' appeared.

From 2012 to 2016, the keyword 'student' was steadily mentioned a lot, which suggests that 'Transition Year' is quite associated with student. Generally, Korea's 'Self-Directed Learning Semester' related keywords were mentioned a lot. Especially in 2016, 'Self-Directed Learning Semester' was mentioned the most, which suggests that Ireland's Transition Year is expected to serve as a compass for a successful operation of Self-Directed Learning Semester.

5. Conclusions

This study searched and collected (crawling) articles from Naver on Transition Year, a role model for Self-Directed Learning Semester and Self-Directed Learning Semester to be enacted from 2016 and analyzed similarities and differences. As a result of analysis, regarding Transition Year, education, career path, self-directed learning, semester system, and experience were drawn as an important factor. In 2012, education, career, test, occupation, and evaluation were important, but in 2016, self-directed, semester system, education, experience, occupation, educational course, and subject appeared as important factors. Regarding Self-Directed Learning Semester, education, self-directed learning, semester system, career, and experience were drawn as important factors. In 2012, education, promise, test, government, problem, and policy were important, but in 2016, experience, career, program, support, diversity, participation, and exploration appeared as important factors.

Commonly in both Transition Year and Self-Directed Learning Semester, education, self-directed learning, semester system, career, and experience were drawn as important factors. This result seems to be attributable to the fact that in Self-Directed Learning Semester, career and experience are important activities instead of test.

In Self-Directed Learning Semester, government, president, and programs were drawn as important factors. Unlike Ireland's Transition Year, Self-Directed Learning Semester was a project led by the government under the presidential promise and policy. This is why this result comes out.

This study analyzed similarities and differences between Self-Directed Learning Semester and Transition Year through crawling of news articles from Naver. Government's policy towards Self-Directed Learning Semester is a good intention, but more positive supports are necessary at the government level for producing various programs and activities so that the Self-Directed Learning Semester can be well resettled and activated. It is also necessary to install online communication window or voice box for achieving smooth communication between government, school, student, and parent.

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