



The Challenging and Transformative Implications of Education for Sustainable Development: A Case Study in South Korea

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ABSTRACT

Sustainable development can be considered one of the biggest global challenges of this era, especially in the domain of education. Hence, this paper presents a case study on how the Tongyoeng Regional Center for Expertise (Tongyoeng RCE) has contributed to the practice of Education for Sustainable Development (ESD) and to the reformation of curriculum development process in South Korea. It establishes a cooperative system between formal education and in/non-formal education within an environment of a conservative and exclusive educational system. While focusing on the substantial achievement of Tongyoeng RCE that has transformed the South Korean education system from a “knowledge and grade-centred” Eastern educational regime to a “value and practice centred” one, this study also addresses how the RCE has initiated a “learning society,” that is, decentralized and deregulated educational communities that are more flexible in resolving the unprecedented challenges of globalization. This research emphasizes the implications of education for sustainable development as a challenging and transformative curriculum development process in South Korea.

KEYWORDS

Education for sustainable development; South Korea; Tongyeong Regional Center of Expertise; learning society; curriculum reform

INTRODUCTION

Education curriculum in South Korea was built and reviewed by the government periodically in the past. Also, curriculum revision was mainly led by professors and experts from related academia and it was gradually expanded the participation from teachers in the field and citizens. However, curriculum revision still has some difficulties to reflect regional specialities and lack of varieties in the groups that participate the revision process. According to previous research, some important strategies that lead educational reform include facilitating ownership from educational practitioners, activating participation, and integrating top-down and bottom-up initiatives. (Ketelaar et al., 2012; Murphy, 2013; Petko et al., 2015; Priestley et al., 2015).

Especially in South Korea, not only students but also parents and education officials are interested in college entrance-oriented subjects, so interest in other subjects is low. In this sense, sustainable development education was limited to receiving attention from students, teachers, and education experts. However, the inclusion of sustainable development education in the 2007-revised national curriculum should enhance the efforts and significance of the Tongyeong RCE, which led to the cooperation of multi stakeholders including academia, field teachers and NGOs. The needs from local schools and society are important in educational curriculum reform process (Berends et al., 2002; Spillane et al., 2002).

Since sustainable development (SD), qualitative development and considering the environment, amassed global attention (Fedulova, 2019), the need for re-evaluating Education for Sustainable Development (ESD) became ever more prominent. Interestingly, ESD is not simply education for SD, but rather a means to achieve SD. Therefore, the role of the regional centres of expertise (RCEs) should be reviewed. Notably, RCE was commenced as a project of the United Nations Decade of Education for Sustainable Development (UNDESD), and there are 175 RCEs all across the world. Among them, six RCEs in the Korea are actively working, and they are considered exemplary cases. "Tongyeong Regional Center of Expertise" (Tongyeong RCE) was initially validated in South Korea. Thereafter, the Tongyeong Education Foundation for Sustainable Development was launched in 2011 to broaden ESD. Subsequently, the RCE Tongyeong Sejahtera Forest was inaugurated in 2015 to facilitate a sustainable community based on learning and sharing. Tongyeong RCE has contributed to ESD in South Korea in many ways, and one of its significant achievements is initializing a paradigm shift in South Korea. Traditionally, experts, including professors and researchers, have developed national curricula. The way ESD was adopted in the national curriculum, however, differed from the traditional way.

This study aims to examine how ESD, a minor issue in Korean education, came to be included as one of cross curricula in the national curriculum through the activities of Tongyeong RCE, a local education network. We also would like to examine the educational meaning of the curriculum revision process in South Korea by instituting a cooperative system between formal education and in/non-formal education within a conservative and exclusive educational system.

Reformation of curriculum development process through implementation process of ESD in South Korea

South Korea has adopted national curriculum and this system has been efficient in terms of operating education and contributing economic growth through education. However, there are some criticisms that the development curricula and evaluation of the curricula are mainly conducted by the central government. This can hinder autonomous education in local educations and schools (Kim, 2000; Park, 2003; Jo & Jeong, 2016).

In this respect, the development of education curricula in South Korea is monopolistic and exclusive because of central government-based system. The education curricula should be opened to reflect the educational demands and the change of society and academia. Thus, it is necessary to operate the education system, participating and cooperating national government, civil societies and other stakeholders to solve nondemocratic and inefficiency education systems made by the monopolistic governmental system (Kim, 2017). In Tongyeong case, however, shows new approach how curriculum can be developed by participating local school teachers, experts, civil society and other related stakeholders. Thus, this research focuses on Tongyeong RCE case to analysis how the case could contribute the change of building of the curriculum used to be exclusive and central governmental system in South Korea by addressing how Tongyeong RCE has been contributed ESD in South Korea.

SD is not only understood as an environmental issue but is also believed to encompass various values regarding the overall maintenance of sustainable development for any given society. Currently, it is understood as a concept whereby mankind must ultimately seek and include liberty, justice, and democracy. In sum, sustainable development can be considered one of the biggest global challenges of this era. Based on current conditions such as the prevalence of poverty and inequality, rapid climate change, and the socioeconomic crisis, it can be concluded that the world is at a turning point. Hence, the cardinality of sustainable development rises as these challenges become more predominant.

SD is possible on the precondition that the attitudes and beliefs of individuals change and that a paradigm shift in production, consumption, culture, and everyday life is achieved. This notion inevitably leads to the issue of education. Accordingly, in 2002, the 57th UN General Assembly adopted the Decade of Education for Sustainable Development (DESD). UNESCO played a role in promoting DESD and United Nations University, which is a UNESCO affiliated organization, in assisting RCE to spread ESD around the world (UNESCO, 2004).

UNESCO drafted the International Implement Scheme (UNESCO, 2003) for the establishment and implementation of ESD and also created guidelines to supplement its effectiveness. ESD aims to integrate the principles, values, and practices of sustainable development into all aspects of education and learning. Thus, the stratagem provides opportunities for all individuals to access the knowledge and information required for a socially, economically and ecologically sustainable future. ESD applies to both formal and informal education, enhances critical and creative thinking through a comprehensive interdisciplinary

approach, and instils a vision of the future in the upcoming generations. In only 50 years, South Korea has succeeded in becoming the 12th largest economy in the world, despite suffering from two historic tragedies: Japanese colonialism (1910–1945) and the Korean War (1950–1953).

As evidence of its recovery, South Korea was admitted to the Organisation for Economic Co-operation and Development (OECD) - Development Assistance Committee (DAC) in 2010 and has first-hand experience of the transition from being a recipient country to a donor country, and education has played a critical role in this transformation (Kook, 2011). Nonetheless, the country's rapid economic growth has brought about an imbalance among the environment, economy, and society. Specifically, the pressure to attain economic growth exceeded the environmental capacity; therefore, the environment was worsened. Consequently, as of 2005, South Korea was ranked 122nd among 146 countries on the Environmental Sustainability Index (ESI), and it was also the lowest-ranking country among nations comprising the OECD countries (Esty et al., 2005). Moreover, 90% of Koreans recognized that the gap between rich and poor was substantial and conflicts between regions, social strata, and generations were widespread; hence, the overall level of social integration was insufficient (Presidential Commission on Sustainable Development, 2006).

Changes in education also played a pivotal role in this process. Whereas in the past, education had functioned as a means to reduce the social gap after the Korean War, the functions and roles of public education have recently decreased with the increase in private education. Excessive competition in education focusing on numerical grades not only caused great social strain, but also an economic burden. Therefore, Koreans have internalized a concern about education, which is evidenced by the political status of the Deputy Minister. With an emphasis on balancing quantitative growth with equal measures of qualitative improvement, the concept of ESD has consistently been advocated, and South Korea is well situated for promoting and implementing ESD based on its plentiful potential and infrastructure in the field of education and development.

ESD first appeared in South Korea in 2004 when the PCSD considered ESD as their core task. Then, an effort was urgently needed to increase the awareness of sustainable development. The abstract nature of the term Sustainable Development had not only unintentionally confused citizens but also frustrated specialist groups, such as opinion leaders or policy decision-makers, in determining what it meant. On June 5, 2005, the World Environment Day, the mission of ESD received a major boost when Korea's president announced the National Vision for Sustainable Development (Presidential Commission on Sustainable Development, 2006). This vision laid the foundation for the Action Plan for ESD as a strategy by driving government-level emphasis. Accordingly, in August 2007, the government enacted the Basic Law on Sustainable Development for the systematic implementation of ESD. Furthermore, it enacted the Environment Education Promotion Act in February 2008 to strengthen ESD in the areas of environmental education. Although the government had been working to finalize comprehensive ESD plans, only an unfinished draft was presented in February 2008, thus putting

it on the agenda of the new government. In 2007, under the 7th revision of the National Curriculum, ESD became an integral part of the curricula and was implemented through after-school or extra-curricular programs. However, when the Lee MyoungBak administration was inaugurated in 2008, it morphed into the Green Growth policy even before the 7th revision of the National Curriculum began.

In August 2008, the president announced the direction of Korean society as one embracing low carbon, green growth (Mathews, 2012) through policies creating a sustainable society in response to climate change and relevant environmental problems. There was a specific focus on education to support this plan; nevertheless, due to the frequent changes within the government administration, ESD within the context of SD under the international agenda remains to be effectively executed.

In 2006, when ESD was first introduced at a model school in Tongyeong, South Korea, there was a shortage of opportunities for teachers to learn about ESD. The teacher training program was not officiated and was only practised by a small number of teachers with a personal interest in related issues. Specifically, both the endeavour from students, teachers, administrators, and parents and continued research and development related to the curricula and textbooks was needed to promote ESD. Yet, South Korea fell short on many of these aspects, even though it has been part of the school curriculum through an inclusive process since 2007. Hence, full implementation has not been possible due to the lack of government support and funding. However, partial implementation was accomplished by a bottom-up approach via the guidelines of RCEs under UNESCO's DESD, the Korean National Commission for UNESCO (KNCU), and non-profit organizations. RCE, KNCU, and other non-profits have also undertaken this approach and other related efforts toward the initiation of ESD in lieu of government institutions.

In particular, South Korea has encountered various difficulties in the process of implementing ESD. First, the comprehensive promotion system of the ESD was complicated. The Korean National Commission on Sustainable Development (KNCSD), the Ministry of Environment, and the Ministry of Education were government agencies in charge of promoting related works. However, each organization had certain limitations. Although the KNCSD acted as the centre with the power to provide comprehensive consultation on ESD, the biannual restructuring process adversely affected the stability of the organization, thus hindering stable promotion. Moreover, because it provided consultation on general state affairs and a wide variety of agendas, the field of education for sustainable development was consequently regarded as less important. In the case of the Ministry of Environment, although it was disseminating the contents of ESD at the central government level, it also faced limitations due to its focus on environmental education. Second, elementary and secondary education in South Korea is oriented around college entrance exams. Thus, ESD was not linked to the Ministry of Education, resulting in difficulties due to the lack of awareness of sustainable development. After the United Nations officially proclaimed DESD, national governments around the world

established ESD National Committees, whereby different ministries cooperated to reflect ESD concepts in education, economics, and environment. To raise awareness about ESD and accomplish DESD on a national level, the Korean National Commission for UNESCO founded the Korean National Committee on ESD in August 2009.

As the Korean National Commission for UNESCO's (KNCU) Expert Committee on ESD, it designs, manages, and reforms the national implementation of DESD. The Korean National Committee on ESD, in cooperation with the UN and UNESCO networks, attempts to distribute and develop ESD in the most efficient way possible while also encouraging governmental and expert participation in relevant activities.

South Korea's ESD process and the role of the Tongyeong RCE

To spread ESD, the United Nations University (UNU) introduced the concept of RCE. Until 2021, 179 RCEs had been certified and were operational. Particularly, RCE refers to a network for formal, informal, and nonformal educational institutions to create a sustainable future through education (UNESCO, 2003; UNESCO, 2004). RCEs scattered worldwide have become regional centres for a global network dedicated to local sustainability problems and contributing to creating a better society for the present and future generations by improving education and learning processes. In this regard, RCE functions as a network that bolsters the collaboration associated with ESD among local actors, rather than a formal educational institution. Through close cooperation between different institutions, RCE performs the role of a mediator in the exchange of knowledge and information, while serving as the major facilitator for the joint development of innovative programs regarding ESD. In addition, RCE enhances the integration of knowledge and information by linking different sectors that need to cooperate to further the cause of ESD.

Sustainable development has been selected as a national vision in 2006 as per the DESD national process strategy was set in South Korea (Mathews, 2012). Until then, the necessity for ESD was not recognized among government officers from the Ministry of Education, public educators, and teachers from elementary and secondary schools. Even professors who in charge of the training of schoolteachers did not pursue the concept of ESD.

Consequently, in June 2005, Tongyeong recognized the importance of ESD through environmental activism via non-governmental organizations (NGOs). Tongyeong is a historical ocean city located on the south coast of South Korea. The city is famous for the heroic deeds of Admiral Rhee, Soon-shin (1545–1598), and is also the hometown of many famous artists. Furthermore, the city is renowned for its high-quality natural fishery products and serves as a marine resort town for tourists. Despite its fishery based economic growth, Tongyeong faces diminishing resources and population drain; thus, creating an urgent need for a new source of development. As a means of addressing such regional problems, Tongyeong was certified as an RCE in 2005.

As part of Tongyeong's implementation of RCE, the city inaugurated the educational network, UNU RCE, in October 2005. While the Ministry of Education and Office of Education handled all the educational policies and enactments, the Tongyeong RCE operated as an executive office with financial support from the city itself. As Tongyeong RCE applied for certification from UNU, the initial organization and education of the public officers were processed by education experts from universities in Seoul, and not from local universities. The Tongyeong RCE organization includes various beneficiaries, as mentioned in the guidelines for the implementation of UNESCO's ESD, and is organized based on cooperation among formal, informal, and non-formal education institutions. Especially, the Tongyeong RCE has been enhanced by the participation of experts from public institutions, organizations, and college professors associated with the disciplines of environment, the maritime field, history, economics, sociology, and culture.

As previously mentioned, one of the characteristics of the introductory phase of ESD through the Tongyeong RCE was the "bottom-up" way practised by the schools, and not the "top-down" way, which was a characteristic of the government. The adoption of ESD in the national curriculum in South Korea differs from the previous process. The first activity after organizing the Tongyeong RCE was the execution of ESD education in local elementary and secondary schools. As the Korean government had adopted the national curriculum, it was impossible to immediately execute ESD in the schools. Therefore, at the beginning of March 2006, after raising awareness of the necessity for ESD education to public officials in charge of formal and informal education, the Tongyeong RCE launched ESD education at two model schools through the Tongyeong Office of Education. Afterwards, the RCE and supporting universities began to raise awareness of the necessity of ESD by targeting teachers from the pilot school. Nonetheless, the Office of Education did not conduct this process. Notably, when ESD was first implemented in Korean schools, it was not initiated by the Ministry of Education administering Korea's formal education, but by NGOs. This system is different from the existing national education curriculum as per the unilateral education system. This case is also exceptional in light of the authoritative school education system instated in South Korea; still, this result was made possible by the following two factors.

First, because the Tongyeong RCE was initiated by the UN's DESD project in South Korea, this nation indicated a more profound interest in UN projects in comparison to Western countries. As the Ubuntu Committee of Peers appoints an RCE, the UNESCO High-Level Panel on ESD holds direct authority. There was a total of 127 RCEs in the world as of 2014: 26 in Africa and the Middle East, 47 in the Asia-Pacific area, 35 in Europe, and 19 in America (Hopkins & McKeown, 2005). Based on this statistic, there were more participations from the non-Western region in comparison to the Western region. While the number of RCEs does not imply comprehensive and enthusiastic participation, developing countries have signified more interest in UN projects than developed countries (Sung & Byun, 2013). This situation can be attributed to the rising aspirations of Asian developing countries, including South Korea,

concerning participation in the global trend. As the only country that has converted from being a beneficiary country to a donor country, South Korea believes that education is the strongest impetus; thus, it has been more active in educational growth.

Second, the success of the Tongyeong RCE to initiate ESD was possible through the financial and administrative support generated from the city government by NGO activists. Governmental officials, including the mayor, agreed on the importance of ESD and supported the acceleration of the implementation of ESD in the region. Thus, ESD can be easily incorporated in a school system in Tongyeong and Tongyeong RCE can be classified as a government-centric type (Park et al., 2014). Besides, in 2006, ESD was first initiated in one elementary and one middle school in Tongyeong, and this project has consistently expanded since then to all school levels, ranging from preschools to colleges (Tongyeong Education Foundation for Sustainable Development, 2014).

Three significant facts emerged as a result of the operation of this project. First, the implementation of ESD in preschools and elementary schools was accomplished with more ease than in secondary schools. Notably, elementary school teachers were more positive about adopting the concept of ESD than middle school teachers. High school teachers had negative opinions about implementing ESD education based on the achievement-oriented education system in South Korea (Kim et al., 2012). Accordingly, more research is needed on how to graft ESD into school education in the achievement-oriented Asian education system of China, Japan, and South Korea.

Second, teachers were concerned about the implementation of educational themes that were not clarified in the existing national curriculum (Inpyoung Elementary School, 2006). Therefore, the Tongyeong RCE advised the PCSD, which led to the establishment of the ESD implementation plan. It also recommended that the Ministry of Education include a sustainable development theme into the 7th revised national curriculum. While the process of changing the national curriculum was executed by the top-down approach led by a public organization under the Ministry of Education, in the case of ESD, the process to change the education curriculum was executed by schools from the Tongyeong RCE. This action is significant because the introductory phase of ESD was processed in a bottom-up manner on demand from the schools, and not by the top-down method practised by the existing college professors and the Ministry of Education. Besides, ESD through the Tongyeong RCE enabled schools to experiment, which in turn, initiated a transformation of the education curriculum.

Third, in the case of teacher training, since the end of 2006, the Tongyeong RCE has provided ESD training to current teachers with the support of the Tongyeong Office of Education. Furthermore, the Tongyeong RCE was appointed to the Gyeongsangnamdo Office of Education and has provided a training program since 2012. The ESD teacher training program was developed by professors, regional experts, and NGOs, and also monitored an active network through informal, nonformal education. Furthermore, it enforced longitudinal linkages and cooperation from preschools to colleges through RCE. The municipal government originally

managed the RCE office, but since 2011, it has been independently managed as a foundation. With the support of the Tongyeong Office of Education, the Tongyeong RCE is currently engaged in multiple projects in cooperation with 26 public institutions, organizations, and businesses as of 2019.

Tongyeong RCE's ESD cases and educational significance

The Tongyeong RCE contributes to the educational development of the community by acting as a network for incorporating sustainable development concepts into various educational resources in Tongyeong. This education endeavour targets every citizen (i.e., students, government officials, housewives, the elderly), and supports them to act as an educator. So far, the main focus of education in South Korea has been on formal education. There was also no need for informal and nonformal education and no attempts were made to incorporate them into formal education. The Tongyeong RCE has allowed educators to recognize that the subject of education goes beyond students. Likewise, in 2007, the Tongyeong RCE Program, which has been promoted since 2005, was recognized as a new model for lifelong learning and was selected as a lifelong learning city by the Ministry of Education and Human Resources Development. Accordingly, the Tongyeong RCE started educational projects for all citizens (Tongyeong Education Foundation for Sustainable Development, 2014).

The following projects indicate how the Tongyeong RCE is contributing to the community: (a) the “Sustainable Fishery”, where everyone in the local population can serve as an educator; (b) the “Mural Painting in Dongpirang”, involving the cooperation among civic organizations, citizens, and students, (c) the “Empty Bowl Movement”, where school education is expanded to provide in-house and social education, and (d) the “Bae-um Masil” project, where the school’s participation in local social education is introduced to interpret these projects/cases from the perspective of ESD. The following is a more in-depth description of these four projects.

A sustainable fishery

The Bureau of Statistics reported data on the trend in fishery production over the past 30 years from the 1980s to 2010. According to the Tongyeong Internet News, there has been a shift in the country’s trend from being a collecting fishery to a culturing fishery due to resource depletion and diminishing fishery grounds. Likewise, there has been a similar shift in Tongyeong. This trend has led to the rising problem of ocean pollution. Tongyeong is economically susceptible to this change because of its geological location within many islands and with fishery being the main economic base.

To address this environmental change, Tongyeong RCE actualized a program for students to understand the concepts of sustainable development. Old fishermen with lifelong experience began teaching students the traditional method of the fishing industry, which enabled students to learn the difference between this method and more recent ones. Specifically, this difference further taught them about sustainable fisheries and development. It is extraordinary that old fishermen are conducting classes for students in South Korea, as their social status is considered

lower than that of teachers. The phenomenon that fishermen are educating students at school serves as a great example to show how this project has overcome some of Korea's social prejudice. This project was the first case whereby local experienced workers, including fishermen, were taught at school in Tongyeong.

Mural painting in Dongpirang

Dongpirang means eastern cliff in Korean and has served as a residential area for low-income citizens. This area was where an urban regeneration project was scheduled; however, when the Tongyeong RCE decided to launch the Dongpirang mural painting project, it changed the town's future from urban regeneration to conservation.

In October 2007, a civic organization called Green Tongyeong 21 held a contest for mural painting under the slogan of public art. With the help of 18 teams made up of art university students, individuals, and local students, they painted the old walls of Dongpirang. As Dongpirang became very popular because of its mural paintings, the city of Tongyeong dropped its original plan to demolish it. Dongpirang is now a new tourist site in Tongyeong. To date, the Tongyeong RCE and the civic organization (Green Tongyeong 21) still hold a biannual contest for mural paintings with local residents and schools to create a town where culture and life can coexist.

Through this project, the value of coexistence was learned. Significantly, residents who were about to lose their hometown received help from their local civic organizations, schools, and citizens to change their town into a sustainable living foundation. Local sustainable development through education is what education for sustainable development seeks, and it is also noteworthy that this change was made through a process of cooperation among schools, the local society, and civic groups.

Under Korea's highly competitive and result-oriented school education system, it is also noteworthy that this mural project was not only initiated but also continued with success. What happened in Dongpirang is revolutionary when compared to the traditional and exclusive school education system in South Korea that lacks cooperation with informal and non-formal education.

The Empty Bowl Movement

In 2006, the Inpyeong Elementary School was selected as an ESD Model School to initiate a program called the "Empty Bowl Movement". It has expanded beyond students, parents, and local universities to include local restaurants. In 2013, the Tongyeong RCE promoted this program by targeting restaurants in the traditional Seoho market to create a social atmosphere that reduces food wastage to build a sustainable society. It is very meaningful that the school is reaching beyond students, who are the traditional targets of education, to their families and local citizens. This movement was a result of how schools could act as a community within a region to spread conclusive sustainable development in the region.

The Bae-um Masil Island Literacy Class

Since 2009, the “Bae-um Masil Island Literacy Class” has been held for elderly citizens in the small island areas of Tongyeong where there were no educational opportunities. Although South Korea is renowned for its low illiteracy rate, some elderly did not have reliable access to education. Most old people live in rural or isolated areas. Therefore, Tongyeong RCE visits and teaches the elderly to promote lifelong education. Since the inception of the program in 2009, 215 elderly had graduated till 2019. In this program, elementary school students also took art classes with older students, which led to many intergenerational communication opportunities. This project represents how such educational opportunities can successfully create ties to the local community.

DISCUSSION AND IMPLICATIONS

Discussion about ESD in South Korea has been progressing in a way that is quite different from that concerning traditional education. Generally, the educational agenda in South Korea has been under the auspices of the Ministry of Education, universities, and government managed research facilities. Furthermore, due to Korea’s policy of designating the national curriculum, teachers have limited autonomy in contributing to the contents taught within their classrooms. It is structurally extremely difficult for teachers to teach materials not included in the national curriculum. Besides, educational experts in universities and research centres exclusively hold authority over the addition of new materials in the national curriculum. Furthermore, the top-down structuring of education in South Korea obligates schools to carry out such designated curricula.

The process of incorporating ESD into both school education and the national curriculum, however, has been taking a different path. Discussions regarding ESD were initiated by the 2004 PCSD and not by the traditional actors, like the Ministry of Education, universities, and education expert groups. The actual employment of ESD was initiated wherein Tongyeong city, rather than the Ministry of Education or regional educational offices, directly supported and conducted research schools. As a result of the efforts of Tongyeong RCE, sustainable development was included in the 2007 revised national curriculum. Eventually, the Tongyeong RCE led to the establishment and expansion of research and education networks, including the training and development of educational programs and guidelines for teachers (Park & Sung, 2007). Such bottom-up approaches, largely instigated via the demands of schools and inspiring curiosities in students (Nasir, 2021), have successfully brought reforms to the national educational system amid the relatively authoritative educational environment of South Korea.

The Tongyeong RCE’s programs are significant in several ways. Various programs are based on the cooperation of formal, informal, and nonformal education in pursuit of teaching values, behaviours, and societies where methodologies for life can be learned, all of which are necessary for achieving a sustainable future as defined in the UNDES implementation plan. Further, the centre successfully established cooperative educational frames to counter regional

problems by gathering capable educational human resources within that region while overcoming the authoritative school systems and the closed nature of Korean educational processes.

Each Tongyeong RCE program contributes to achieving cooperation among formal, informal, and nonformal education. For instance, the old fishermen's sustainable fishery classes serve as an extraordinary case in contrast to the traditional social status of teachers, which is highly recognized in Asian countries. The Dongpirang mural paintings illustrate how activities led by civic group programs can induce a change in local society. Similarly, the Empty Bowl Movement has transformed the local society through initiation by the schools. The Bae-um Masil Island Literacy Class has given the rural elderly their first opportunities to learn about South Korea and its culture. All these cases, therefore, serve as excellent examples that everyone can be an educator and a learner; an example that illustrates that the goals of sustainable development can be met through education.

A close examination of the substantial achievement of the Tongyeong RCE has not only illustrated how the Korean education system transitioned from "knowledge and grade centred" Eastern educational regime to a "value and practice centred" one, but it also reveals how a "learning society", comprising decentralized and deregulated educational communities that are more flexible in resolving unprecedented challenges of globalization, can be initiated. This research emphasizes that the implication of ESD is a domain of challenge and change in Asia. Subsequently, the Tongyeong RCE has focused on sustainable development through the interconnected issues of environmental, economic, political, social, and cultural factors and tries to find relevant curricular responses. Moreover, it is mainly facilitated by local specialists, educators, and activists who ask for changes in national education policies and current national education curricula to adopt and promote this model. This research suggests that this innovative phenomenon of educational changes from the bottom up, in contrast to Korea's dominate, top-down authoritative and formal education-centred policies, could act as a role model for practicing education for sustainable development in other Asian countries.

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