# THE CREATIVE CULTURAL PRACTICE OF SHARING ECOTOPIAN VISIONS THROUGH A COLLABORATIVE ART PROJECT

Kyong-Mi PAEK

Ulsan National Institute of Science and Technology,
Division of General Studies
UNIST-gil 50, Ulsan 44919, South Korea
E-mail: kpaek@unist.ac.kr

Today's environmental challenges have prompted educators to explore ways to promote environmental sustainability. Contemporary artists working in ecological realms have presented distinct ways of understanding ecological concerns and proposed creative solutions to environmental challenges through ingenious means that reach people beyond scientific realms. Despite recognition of those creative cultural practices as invaluable educational resources, such efforts have not been a significant part of art curricula. This article aims to expand art's potential role via reports on a recent curriculum development study of an on-campus collaborative art project in which practising artists known for their bioregional orientations were invited to inspire engineering students. This intra-case analysis of developing group projects is followed by a cross-case analysis, which focuses on the distinguishing features that emerged from students' responses to group activities. The findings are discussed to provide implications for the creative cultural practice of sharing ecotopian visions through art in the context of interdisciplinary learning.

Keywords: ecological art curriculum, ecotopian vision, environmental sustainability, collaborative art project, creative cultural practice, curriculum development, interdisciplinary learning.

## Introduction

Arising from industrial and other trappings of modern civilisation, the mounting crisis of environmental degradation has inspired people to seek ways to reconnect humans with the natural world through lifestyle changes that search for more harmony with natural systems (Anderson, Guyas 2012; Bowers 1993; Gablik 1991). A sustainable ecosystem in which human and environmental systems can co-exist has been envisioned through the writings of Ernest Callenbach (1990), inspiring several deep ecologists such as Bill Devall and George Sessions (2001). These endeavours are largely grounded on an ecotopian vision of the environment, which influenced

the counterculture and the green movement in the 1970s. The ecotopian vision, as an alternative vision to the utopianism of modern industrialised culture, considers all living and nonliving things as interdependent rather than separate systems (Garoian 1998). This vision dovetails with the emerging role of educators in creating learning milieus that are sensitive to practices that promote environmental sustainability and socio-ecological wellbeing.

Regarding the challenges that environmental education has confronted in the 21st century, Stewart J. Hudson (2001) pointed to traditional, measurable-results-oriented learning systems in schools as one of the major roadblocks in teaching children to become responsible and productive members of society. He particularly stressed the need for activity-based learning for today's children, who often lack direct contact with nature. Encouraging students to move beyond the walls of the classroom, hands-on environmental activities would help them discover more about the natural world, synthesise knowledge and skills, and test their preconceptions and misconceptions against real experiences (Hudson 2001). This view has been supported by empirical studies that reported how outdoor environmental education programmes contributed significantly to the development of students' affective relationships with the natural environment (Aguilar *et al.* 2008; Palmberg, Kuru 2000). Chung-Ping Yang also argues that students should be urged to partake in direct experiences with nature to cultivate an appreciation and respect for nature, which cultivates lifelong behaviours:

> "If an interest and ability to appreciate natural beauty were extensively embedded into students' environmental awareness at a young age, then students would consequently become environmental monitors who would then voluntarily take responsibility for conservation because they are urged to protect objects they favour" (2015: 89).

Based on the premise that students must first develop a relationship with the land before they can be expected to protect it, ecological approaches, such as community-based eco-pedagogy (Eryaman *et al.* 2010) and critical place-based pedagogy, have been developed (Bertling 2015; Graham 2007). These approaches are suggested as alternatives to the conventional educational approach which ignores the peculiarities of various places and tends to standardise students' experiences (Jennings *et al.* 2005). According to Tonia Gray and Cameron Thomson, ecopedagogies are concerned with "a more conscious connection with nature through ecological ways of experiencing, thinking, and knowing" (2016: 239). They found that "incorporating the arts into immersive place-based education programs can increase connectivity with the environment and facilitate the development of socially responsible and pro-environmental learners" (2016: 239). Several researchers have explored the potential role of art in place-based educational practice (Gray, Thomson 2016; Bertling 2015; Inwood 2008; Gradle 2007). In particular, the creative cultural practice of artists working in ecological realms has been recognized as invaluable resources for developing an ecological art curriculum (Song 2009, 2010; Walker 2001; Hollis 1997). Over the past four decades, many contemporary artists – such as Andy Goldsworthy, Lynne Hull, Mel Chin, and others – have explored and addressed ecological issues and concerns

through diverse forms of place-based art practices. Hilary Inwood values the works of these artists, who present:

> "their understanding of place-related concerns and their ingenious means of proposing and communicating creative solutions to environmental challenges, reaching people in ways that scientists have been unable to do" (2008: 32).

As for the response of the education community to such works, concerned educators, such as Mark Graham (2007), point out that although many contemporary artists make ecological issues important aspects of their works, these issues have not been included to any significant degree into art curricula. He says such omissions neglect art's potential to educate and encourage active engagement with ecological concerns. Cynthia Hollis notes:

> "An art curriculum that deals with ecological issues can empower students with the understanding that they, as creative individuals, can have an active voice in protecting their environment and changing current devastating ecological trends" (1997: 21).

Educators in the arts have continued to explore diverse ways to promote environmental awareness, sensitivity, and appreciation through art (Bertling 2015; Yang 2015; Inwood 2008; Graham 2007; Hollis 1997). Moreover, recently, in an effort to promote interdisciplinary learning opportunities (Jacobson *et al.* 2016) and transdisciplinary education (Clark, Button 2011), the field has been broadened through the development of integrated science and art education. This continuing effort is based on the premise that different perspectives and ways of knowing the world can help students to take a more holistic approach to viewing problems and to develop more creative ways of finding solutions than those that occur in traditional technocentric teaching and learning contexts.

A brief review of these ongoing educational discussions and diverse approaches to exploring art's potential role in dealing with the ecological issues of our time indicates that approaches to the development of ecological art curricula require further study. This article aims to contribute to the ongoing research on ecological approaches to education by adding to our empirical understanding of the creative engagement that is promoted in an interdisciplinary learning context. In this article, I review a pilot art project, which I designed and executed to create an interdisciplinary learning space to cultivate environmental awareness among undergraduate engineering students who took an art course called "Arts and Creativity", offered by the Ulsan National Institute of Science and Technology (UNIST) in South Korea. For purposes of this study, four artists working with nature were invited to develop collaborative group projects with students. The following sections include an overall description of the process, as well as project outcomes, followed by a discussion of some noteworthy features identified from students' responses about their project experiences.

## Context of study: collaborative art project

The four-day, on-campus collaborative art project (YouTube 2016a) was executed in January, 2016 in conjunction with an interdisciplinary convergence research project,

"Science Walden" wherein scientists and artists work together to solve growing concerns about environmental sustainability and social problems, such as human alienation and absence of communication. As a way to support the world imagined by "Science Walden", the art project was designed to provide students with unusual learning experiences of appreciating the natural environment through art.

## *Participants*

For the intended collaborations in this project, I invited four nature artists (see Table 1) affiliated with *YATOO*, an artist community based in Gongju, South Korea, known for its unique artistic visions and methodologies for working with nature. *YATOO* was founded in 1981 by a group of local artists who were interested in developing their own creative methods of forming a relationship with nature, which was distinguished from conventional approaches, such as considering nature as a subject matter or a material from which to create art:

> "*YATOO* artists preferred to enter into nature and work in it with no preparation except [an] empty body and mind. Their works were often formed by restrained actions through using their body, were started from a natural object, and [they] did not think [of] nature only as [comprising] materials they can use or a place to install their works, but [they aimed] to treat nature as a partner working alongside them with their works" (yatoo-i 2016).

In their relational approach to integrating art with nature, the practice of *YATOO* artists has a connection to the characteristics of ecological art that Barbara C. Matilsky presents, stating that "art does not isolate and interpret aspects of nature but rather integrates them into a total network of relationships" (1992: 57). Among diverse approaches to environment presented by artists working in the ecological realms, *YATOO* does not present an explicit interest in socio-political changes. Rather, it focuses on imagination and aesthetic appreciation of nature (Brady 1998) and envisions its role in changing the way that people perceive their relation to the world where they live (Grande 2004). In this collaborative project, such bioregional orientations of *YATOO*'s art practice were expected to inspire young prospective scientists in engineering.

Thirty-eight students from diverse majors in engineering and business (see Table 2) who were taking my winter Liberal Arts course, "Arts and Creativity", participated in the project to fulfil the final course requirement. In this university (UNIST) specialising in science and technology, "Arts and Creativity" is the only undergraduate

Table 1. Description of artist participants (created by author)

| Artist | Gender/age | Experience as an artist | Major form of work/medium |
|---|---|---|---|
| Ko, Seung-hyun | Male/60s | Over 30 years | Installation/wood |
| Jeon, Won-gil | Male/60s | Over 30 years | Installation/plants |
| Kim, Soon-im | Female/30s | Almost 10 years | Installation/stone |
| Kwon, O-yeol | Male 40s | Over 10 years | Photography/plants |

Table 2. Description of student participants (created by author)

| Major | Number of students |
|---|---|
| Energy and Chemical Engineering | 9 |
| Electrical and Computer Engineering | 6 |
| Division of General Studies (1st year) | 5 |
| Mechanical and Nuclear Engineering | 4 |
| Life Sciences | 4 |
| Natural Science | 3 |
| Materials Science and Engineering | 3 |
| Business Administration | 3 |
| Urban and Environmental Engineering | 1 |

course that allows students to explore diverse ideas and practices in visual arts. The outcomes of a brief survey at the beginning of the course showed these science major students' limited knowledge but relatively strong interest in the arts. Throughout the course, as the primary instructor, I encouraged my students to explore diverse aspects of contemporary arts. Thus, by the time this project began, they were equipped with some background knowledge about the arts.

## Structure

Prior to their visit, I asked the artists to inform me regarding their rough ideas about the group projects that they would like to develop with the students. The on-site project was preceded by four sequential daily activities, as follows: (1) artist talks and group discussions, (2) group project developments, (3) installations of project outcomes and (4) on-site presentations (see Table 3).

Table 3. Structure of the project. (created by author)

| Day | Activity (duration) | Purpose/Focus |
|---|---|---|
| First | Artist talks (80 min – 20 min per artist) | To help students understand what each artist thinks and does and decide whom they want to work with |
| | Group discussions on project planning (40 min) | The students were divided into four groups. Each group with the assigned artist moved to a small classroom to plan what to do for the following days. |
| Second | Group project development with artist (150 min) | Based on the group discussions on the first day, each group began working on the group project. |
| Third | Group project development with artist (150 min) | Each group kept working on the project, exchanging ideas for selecting the best place and forms of exhibiting their final outcomes. |
| Fourth | Installations of project outcomes (over 40 min) | The artists and the students worked together to display their outcomes in an attractive form. |
| | On-site presentations (80 min – 20 min each) | Each group talked about the meaning of their project outcomes and shared their experiences during the four days of collaboration. |

### *Data collection and analysis*

It was not the aim of this study to evaluate the effectiveness of individual group projects, rather it aimed to understand the participants' experience in a given context and explore their potentials to provide insight into the practice of sharing artistic visions. By its exploratory nature, the study employed qualitative research methods. During the four days of the project's activities, multiple forms of data were collected, including observations, field notes, photos and videos. It also included additional data, such as group project ideas received from artists, student reflections and group presentation materials. Although as the event organiser, I carried out the study in a form of participant observation research, I considered strategic ways to collect the detailed records of group activities that were happening simultaneously in various places around the campus. To increase efficiency and reliability, I prepared worksheets[1] to be filled out by the students and assigned a few students in each group with the tasks of collecting the worksheets and taking photos of daily activities The students' responses to their daily art activities were collected through a set of simple questionnaires that asked what they viewed as expected, interesting, impressive, regrettable, and/or difficult about their project activities. As a participant observer, walking around the campus, I had plenty of occasions to double check the meanings of the collected data.

The reviews in this paper focus on three group projects (out of four) and begin with a within-case analysis that examines how the students in each group collaborated with the artist in the process of developing the group project. It is followed by a cross-case analysis that pays attention to some noteworthy features that emerged from the student responses to daily activities. The outcomes are organised in two parts – the project development process of each group and the distinguished features identified from the cross-case analysis.

## Outcomes of group projects

Table 4 shows brief descriptions of the three group projects. While all projects were developed collaboratively, each group's work process was affected by the participants' interests and preferences. The artists with Groups A and B who brought relatively clearer ideas about the project made the group activities look more like artist-led undertakings, while the artist with Group C, who was more interested in hearing about what the students wanted to do, made the activity appear more like a student-led endeavour.

### *Group A: "UNIST Gayageum"*

The students in Group A named their work "UNIST Gayageum", created as a collaborative version of Seung-hyun Ko's Gayageum project, "The Sound of a Hundred Years",

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[1] The worksheets were designed for students to fill out, comprising the following: (1) interests, problems and issues emerging in the development of the group project; (2) major points of group discussions; and (3) individual students' daily reflections on their group activities.

Table 4. Descriptions of three group projects (created by author)

| Group | A | B | C |
|---|---|---|---|
| Artist | Seung-hyun Ko | Jeon Won-gil | Kim Soon-im |
| Title | "UNIST Gayageum" | "Dimension" and "Black Code" | "Dola, Boja" |
| Description | This musical instrument is presented with the aim to deliver a feeling of comfort to the students walking along the hallway. | Made of dots and lines, this work is presented as a representation of invisible relationships between the natural and the social systems. | Created by using stones found around the campus, this work is presented as a result of the students' exploration of finding unfamiliar aspects from the familiar in daily life. |
| Outcome |  |  |  |

which Ko has been working on since 2000.[2] In his talk on the first day, Ko presented his project as a type of site-specific or place-based installation work; he usually makes gayageum by using local dead trees found on the spot where he works. People can observe the ongoing work process in an open space and are encouraged to play the instrument when it is completed. Ko usually works alone, but for the campus project, he proposed a collaborative version, expecting it to become an occasion for an expansion of his project. Ko wanted to see if the students would suggest some possible ways of enriching and amplifying the sound. Many students commented on Ko's talk; they were impressed by not only his respectful attitude towards nature but also his actual creation in his gayageum work. It was received as an effort to breathe new life into a dead tree by transforming it into a musical instrument, which would become a medium for sharing feelings with others when played. In the follow-up classroom discussion, Ko showed gayageum's structure by pointing out the parts that created and delivered the sound, explained the basic process of making it and asked if the students had ideas to propose. The students' ideas included experiments on sound by changing the shapes, adding new parts and applying various materials to the strings and the sound box. Based on the discussions, a work plan was set for the following days (see Table 5).

On the second day, the group's work began by visiting a local junk shop to find materials to be used. Staying there for about an hour, the students collected several items and returned to the studio, where a log that the artist brought for the project was placed. Exchanging ideas to figure out possible ways of modifying the sound

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[2] Gayageum is originally a South Korean traditional musical instrument. Under his own artistic vision, Ko created many different versions of gayageum and installed them in several places around the world, including Canada, Romania and Germany (see YouTube 2016b).

Table 5. Work process of Group A (created by author)

| Day 1. Artist's talk and in-class discussion | Days 2 and 3. Group activities: "UNIST Gayageum" project | Day 4. Installation and presentation |
|---|---|---|
|  |  |  |

box by using the collected items from the junk shop, the students devoted the rest of their time to the log, mostly carving the parts that became a sound box. The work on the third day focused on finding effective ways to modify the sound system. The group added the materials and altered the shapes to enrich and amplify the sound. As engineering majors, several students exhibited their personal interest in dealing with the challenging task and expressed their regret about the time constraint. A student wrote, "There should be some possible ways to control the volume and the tone of the sound, but it was hard to figure out the ways in just two days". Another considered, "I would like to make an electrical gayageum by changing the sound into an electrical signal although the idea of using electricity would be against the concept of the nature artist". On the final day, the group displayed the completed instrument in the hallway and made a brief on-site presentation. After playing a simple musical piece, a student introduced the work as a healing instrument. With its revived sound born out of a dead tree, the group wished that the "UNIST Gayageum" would deliver a feeling of comfort to the busy students living in an increasingly competitive world.

## Group B: "Dimension" and "Black Code"

Group B's project was largely inspired by Won-gil Jeon's continuing exploration of the relationship between humans and nature, as reflected in his art practice. On the first day, Jeon presented a video of his recent project, "One Hundred Weeds" (calameo 2016), which illustrated his careful examination of the various weeds and plants growing around his studio. His exploration began by finding plants and observing, symbolising and coding their biological peculiarities. It was developed further by creating a set of signs that represented his relationship with the plants and the surrounding environment. Many students commented on Jeon's art practice in relation to the materials and the concepts. A student stated, "I learned that a personal interest in the place where I live could be the content of an artwork, which could further become a base for another idea. It was interesting to know that the artist intentionally did such practice to allow new ideas to emerge and be developed". Another student wrote that it was interesting to see. Jeon explores and interprets his relationship with the surrounding environment, paying attention to such trivial things as weeds. Several students commented on being impressed by the artist's aim in life – to find unconventional ways of observing and expressing things. In the follow-up classroom session, the group members exchanged their individual impressions of Jeon's idea of exploring

Table 6. Work process of Group B (created by author)

| Day 1. Artist's talk and in-class discussion | Day 2. Group activities: "Dimension" project | Day 3. Group activities: "Black Code" project | Day 4. Installation and presentation |
|---|---|---|---|
|  |  |  |  |
|  |  |  |  |

the relationship between humans and nature, as illustrated in his work, "One Hundred Weeds", and discussed possible ways to apply the idea in two separate but interconnected group projects, later named "Dimension" and "Black Code".

On the second day, the group gathered around the lobby and decided to utilise an empty wall under the stairway. Using a black tape, Jeon asked the students to initiate the work by putting a dot on the wall. Considering the dot as a seed, he guided individual students to put more dots and then encouraged them to connect the dots with lines (see Table 6). The students' comments showed some changing aspects of their impressions about the developing activities, as follows:

– "As more dots were added and connected with lines, it looked as if a dot grew into a large tree";
– "As the lines became much more complicated, they looked more like a growing wire net or a matrix of paths";
– "Our drawing activity itself can be perceived as a performance of representing human nature, such as our desire to be connected by forming and building relationships".

Later, the group presented the work with the title "Dimension", as an image representing invisible relationships between the natural system and the social system created by humans.

On the third day, the group worked on the second project by collecting leaves, nuts, berries and plants around the campus and bringing them back to the classroom. Jeon helped the students observe and examine those collected plants carefully, asking them to abbreviate the forms and shapes and transform them into personalised symbols. Then, using black on a black foam board, he asked the students to turn the symbols into three-dimensional forms. At the on-site presentation on the final day, these symbols were presented as "Black Code", a representation of intimate relationships between students and natural objects. The students' responses showed that the exploration and transformation of natural objects into many different forms were new experiences to them as engineering students who were accustomed to search for preset, definite answers.

### *Group C: "Dola, Boja"*

In her talk, artist Soon-im Kim showed several images of her works that were done in the open air, such as a beach ("The Seat of Wind: The Space 61", 2014), a riverbank ("A Point & Wave: The Space 60", 2014) and under a bridge ("9 of Nanun Stone: The Space 29", 2011) (kimsoonim 2016). She presented herself as an artist who liked to travel, seeking new encounters with natural objects, places, people and local stories, and who enjoyed interpreting such encounters from a subjective viewpoint. She preferred using natural objects, such as stones, over ready-made materials from art supply stores and was concerned more with the process than the result. The final outcomes were diverse in form, ranging from drawings to three-dimensional sculptures and site-specific installations. The students were interested in hearing that the artist intentionally used local stories and local materials in creating artworks. A student noted:

> "If an artwork is made of what is peculiar in that place, it can be seen as a meaningful work lasting for years. Likewise, if we create something out of materials found in our own place, it may become a memorable work that reflects our campus life".

In the follow-up group discussion, the students suggested several ideas in relation to what they found interesting in Kim's work – making place-based stories that focus on local objects and their contexts, creating an artwork by using natural materials found in and around the campus and producing an artwork that does not damage the environment. The idea that was developed into the group project was a presentation of the stones found in isolated and hidden spaces in the campus (see Table 7).

On the second day, the group walked around the campus; they took a wild and unfrequented path to collect stones and photographed the spot where each stone was found as a visual record of a found object in its original context. Kim guided the students to not only examine what was peculiar about each stone that they picked up but also consider what was distinctive about the scenery from the stone's perspective. Spending about two hours walking around the campus, the group collected 140 stones. The work on the third day was devoted to washing the stones and finding the appropriate spot to place the stones and their photos, as well as an effective way of arranging and displaying them. Several students mentioned about what they learned from the activities of dealing with stones:

- "As the stones were washed, the original colours were exposed. I was able to see that each one had its own shape and colour";
- "I came to know that the three-dimensional effect of the stones could be controlled by altering their arrangements on display".

On the final day, the group placed the stones on the floor in an open space and posted the photos of the stones on nearby columns. Alongside the photos, the group placed a map to show the spots where the stones were found. The group named their work "Dola, Boja", which can be understood in two ways in Korean. It means "Let us look at stones". It can also be interpreted as "Let us look back". At the presentation, a student informed the audience that the meaning of their group work was "Let us s look back at the unwatched and abandoned spaces in our campus", depicting the work as a result of the group's effort to find unfamiliar aspects from something familiar in their daily lives.

Table 7. Work process of Group C (created by author)

| Day 1. Artist's talk and in-class discussion | Day 2. Group activities: Collecting stones | Day 3. Group activities: Examining stones | Day 4. Installation and presentation |
|---|---|---|---|



## Discussion: responses to the collaborative project

Some noteworthy features elicited from the process of comparing responses with artist–student interactions observed in group activities included the student's reactions to the following: (1) working with artists, (2) the process-oriented and divergent nature of art practice, and (3) sharing the artists' place-related concerns and ideas regarding cultivating relationship with environment. The findings are discussed to provide implications for the creative cultural practice of sharing ecotopian visions through art in the context of interdisciplinary learning.

### *Working with artists: challenges and potential benefits*

The students' responses indicated both challenges and potential benefits of working with artists. Many students exhibited difficulties when facing an open concept that lacked clear rules and guidelines. A student working with Jeon pointed out that, "Unlike what I do in engineering assignments, the artist wanted me to construct something based on my own ideas. I was really doubtful if anyone could understand my work when it was based on my personal thought". While the ambiguous processes weakened the students' confidence, the tangible outcomes seemed to increase their satisfaction rate significantly. A student who feared initiating the activity without a prearranged plan in the "Dimension" project later stated, "The artist just asked us to begin with a black spot on the wall. But I was surprised by the beauty of the end result".

Cultural differences regarding ways of thinking and doing appeared to be a major concern of both the students and the artists in the beginning. However, as both sides learned more about each other's lingo, their earlier attention to the obstacles shifted to the potential benefits of collaboration. One student, who valued the power of collaboration stated, "Each one of us may not have enough artistic sense, but I came to see that I can do something meaningful when worked together and directed by artists". Another commented, "It was great that we, as the ones who had nothing to do with art, actually made an artwork". As for the artists who were used to working alone,

their collaboration with students was received as both a challenge and an opportunity. Kim admitted, "Although I came here with some sense of expectancy towards working with engineering students whom I hardly met in my surroundings, I felt somewhat doubtful about what could be done with them". Later, she stated, "Working with the students was a great stimulus to me. I'd hardly imagined that this kind of outcome was possible by working with others".

Students have come to appreciate collaborating with artists as an opportunity to reduce their psychological distance from art and break their stereotypical images of artists. At the final project presentation, the students across the groups exhibited broader perspectives on their concept of art. A student who participated in the "Black Code" project stated, "I thought that art was something to be appreciated and understood by others. But this project informed me that personalised symbols, something transformed through the ways that can only be recognised by me, can also be an art".

### The process-oriented and divergent nature of art practice

At the final presentation, several students exhibited their awareness of the process-oriented aspect of their projects. In the "Dola, Boja" project, one student stated, "I came to appreciate the whole journey of hanging around the campus to find stones, washing them and exchanging ideas on how to present them to others. In fact, everything we did formed important components of our work". At the same time, a few students were concerned about both the exploratory and divergent nature of the process-oriented activities because those aspects caused them some difficulties in understanding the meanings of the outcome. A student who participated in the "Dimension" project questioned its significance, "It is unclear to me what the work really means since it is just a result of spontaneous actions". While some students were sceptical about the uncertain meanings of art brought by an impulsive work process, others appeared more receptive to its divergent nature, showing a keen interest in knowing that the meanings of the work could be interpreted differently among individual students who went through the same work process. Particularly, in the "Dimension" project, the students were impressed with the multilayered meanings of their work that emerged through the process of their drawing activities. A student said, "At first, it looked like a web or a net; then later, I came up with an idea of Social Network Service". Another commented that the process of transforming a very simple dot into a much more complex structure could be interpreted as the relational aspects of life. From the outcomes of the "Black Code" project, the students were surprised to observe that so many diverse forms could grow out of the same materials. A student noted that the practice was an exercise that allowed him to use his "unused" muscles. For some students, the exploration and transformation of natural objects into many different forms constituted a new experience for them as engineering majors accustomed to following pre-set rules in searching for definite answers. Those who valued their experience in the projects defined art practice as an activity of generating and developing new possible answers, and they considered artists as the ones who paved the way to new areas.

*Sharing ecotopian vision through art*

The holistic stance of the ecotopian vision rejects human-centric views on nature and emphasises the interdependence and interconnectedness of all things around us (Garoian 1998). This vision has infiltrated deep into Ko's practice, guided by his respectful attitude toward nature; Jeon's artistic inquiry into his surrounding environment, which reflects his continuing exploration of the relationship between humans and nature; and Kim's ongoing search for new encounters with natural objects and their contextual relationship with local people and their stories. The bioregional consciousness that permeated the practice of these nature artists seemed to increase students' environmental awareness and sensitivity, and to inspire them to change the way they perceive their relation to the place where they lived (Grande 2004; Brady 1998). A student who participated in the "Dola, Boja" project regarded her discovery of the original colours of the stones as an invaluable occasion to reconsider the meaning of the natural objects. The students who valued the opportunity to visit unwatched and overlooked places on campus admitted that finding unfamiliar aspects within familiar objects in their daily lives allowed them to form a shared sense of belonging to their natural surroundings. By supporting art's potential role in raising awareness of and engagement with environmental concepts and issues, as stressed in earlier studies (Gray, Thomson 2016; Song 2010; Garoian 1998; Blandy, Hoffman 1993), these findings from student-artist interactions and collaborations in the present study suggest some possibilities for developing eco-pedagogy by extending the scope of art education "to offer a dynamic way to increase the power and relevancy of learning about the environment by providing an alternative means of furthering learners' ecological literacy" (Inwood 2008: 30).

## Educational implications of creative cultural practices

Three collaborative projects presented in these articles represent but a few of the diverse examples that can be generated within the context of integrated art learning. And yet, learning that involves engineering students working with practicing artists, by its interdisciplinary nature, has its own educational significance. Such collaborations can be viewed as a form of creative cultural practice that allows individual students to develop skills through direct experiences in diverse forms of communication through art. Participants' experiences in the creative cultural practice of working with artists in this study turned out to be particularly valuable to the engineering students, who were accustomed to a more structured learning context (Bequette, J. W., Bequette, M. B. 2012; Eubanks 2012; steam-notstem 2010). Throughout the project's development, I observed many students who struggled to develop multi-directional ways of thinking as well as understanding the multi-layered meanings steeped in the ideas and practices of artists. However, the students' positive responses to the project activities by the end of the programme confirmed the effectiveness of engaging in collaborative art learning contexts as such ill-structured contexts stimulate a flexible mode of thinking (Efland 1995). The potential benefits of the floating learning space created

in this pilot study provide insights into learning methods characterised by fluidity, unpredictability, and complexity, which are necessary for students living in an era of uncertainty (Benade 2015; Bolstad *et al.* 2012). By promoting unconventional ways of thinking in students, such as using their creative imagination, cognitive flexibility, and divergent thinking skills, potential opportunities for dealing with uncertainty were identified in this study's interdisciplinary learning space, where engineering students and nature artists worked together. These findings may contribute to ongoing international discussions on the potential role of the arts in promoting educational innovations by adding to our empirical understanding of the creative engagement that is promoted by interdisciplinary learning.

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# KŪRYBINĖ KULTŪRINĖ EKOTOPINIŲ VIZIJŲ DALIJIMOSI PRAKTIKA KOLABORACINIAME MENO PROJEKTE

## Kyong-Mi PAEK

### Santrauka

Nūdieniai aplinkos metami iššūkiai paskatino pedagogus palaikyti aplinkos tvarumą. Šiuolaikiniai menininkai, dirbantys ekologijos srityje, pristatė skirtingų ekologinių rūpesčių supratimo būdų ir, pasitelkdami išradingas priemones, pasiūlė kūrybinių aplinkos teikiamų iššūkių sprendimų, kurie būtų pasiekiami ir žmonėms anapus mokslo srities. Nepaisant to, kad tos kūrybinės kultūrinės praktikos pripažįstamos kaip neįkainojami švietimo ištekliai, tokios pastangos nėra reikšminga meno programų dalis. Šiame straipsnyje keliamas tikslas išplėsti potencialų meno vaidmenį, remiantis neseniai atliktų programų plėtros tyrimų ataskaitomis. Tyrimai buvo skirti universitetiniam kolaboraciniam meno projektui, į kurį inspiruoti inžinerijos studentus buvo pakviesti dėl savo bioregioninių pakraipų žinomi praktikuojantys menininkai. Šių grupinių projektų plėtros intraatvejo analizė pagrįsta tarpusavio atvejų analize, kurioje susitelkiama ties skiriamaisiais bruožais, išryškėjusiais pasitelkus studentų atsakais į grupių veiklas. Atradimai aptariami siekiant numatyti galimas pasekmes kūrybinei kultūrinei dalijimosi ekotopinėmis vizijomis praktikai meno srityje tarpdalykio mokymo kontekste.

Reikšminiai žodžiai: ekologinio meno programa, ekotopinė vizija, aplinkos tvarumas, kolaboracinis meno projektas, kūrybinė kultūrinė praktika, programų plėtra, tarpdalykis mokymas.