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Photovoice as a visual–verbal strategy to develop student's representation and meta-representation skills in landscape education

Chul-Ki Cho [1*], Hyo-Jeong Kim [1], Wonseob Song [2]

[1] Department of Geography Education, Kyungpook National University, Daegu, SOUTH KOREA
[2] Department of Geography Education, Jeju National University, Jeju, SOUTH KOREA

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Abstract

This study examines a participatory community-based research project in which young people explore various 'globalization landscapes' represented in their daily lives. In this photovoice project, each student applies the concept of globalization landscapes that they learned in the classroom to the local community where they live, takes photos of the globalization landscapes represented in their place, and selects the most appropriate case. Then, with their own voices or narratives, students present their chosen interpretations of the photographs that depict globalized landscapes. As a result of this study, it was found that the photovoice project contributed to the improvement of students' representation and meta-representation competencies in representing the landscape of globalization. We also propose that as a pedagogical tool, photovoice provides a set of pedagogical values for educators. For example, photovoice enables the visualization of young people's daily experiences, elicits personal meaning and emotion, promotes real-life and active learning, evokes critical consciousness, and strengthens students' visual literacy and meta-representation competency in terms of their visual reading, writing, and thinking.

Keywords: globalization, landscape, photovoice, representation and meta-representation competency, visual literacy

INTRODUCTION

In contemporary society, we see various visual materials everywhere in our daily lives, which we can refer to as a 'flood of images.' Therefore, in this visual era, students must be able to interpret, analyze, and critically look at various visual materials to live in present and future societies (Bourque & Hamerlinck, 2021; Bowen, 2017; Chai, 2019; Dickens, 2017; Ervine, 2016; Lacerda, 2020; Lee, 2011; Melik & Ernste, 2019; Rawding, 2007). Accordingly, teachers should develop students' perspective so that students can read various visual materials, interpret them from their own perspective, and look critically.

Compared to other subjects, geography has a very high utilization of visual materials. Therefore, students can cultivate graphicacy and visual literacy through geography classes (Balchin & Coleman, 1966; Boardman, 1983). Importantly, students should be able to not only read visual materials but also interpret and analyze them more actively. Furthermore, when students can create visual information from their own perspective and generate visual data, this can enrich not only their thinking but also their higher-order cognition, which includes creativity (Lee, 2011).

Graphicacy or visual literacy can be divided into an input aspect of reading information from graphics and an output aspect of generating graphic data according to a situation and purpose (Bowen, 2017; Chai, 2019; Ervine, 2016; Lee, 2011). So far in school education, visual literacy education has not been able to develop students' ability to generate (output) by focusing only on input, and students have had difficulty interpreting visual materials such as photos, graphs, and diagrams when presented. In the meantime, studies related to spatial representation and visual literacy have mainly focused on maps and graphs, with most studies related to graphic interpretation (input) and very few related to

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✉ ckcho@knu.ac.kr **(*Correspondence)** ✉ hoejung76@naver.com ✉ wssong@jejunu.ac.kr

Contribution to the literature

- This study examined a participatory community-based research project in which young people explore various 'globalization landscapes' represented in their daily lives.
- This study shows how student applies the concept of globalization landscapes that they learned in the classroom to the local community where they live through photovoice project.
- This study shows that the photovoice project contributed to the improvement of students' representation and meta-representation competencies in representing the landscape of globalization.

creation (output) (Balchin, 1976; diSessa & Sherin, 2000; Lee, 2011). Therefore, students' balanced visual literacy skills must be improved through visual literacy education that includes both the interpretation and generation of visual data. We think that photovoice is an important pedagogical tool that can develop students' balanced visual literacy skills.

One of the most commonly used visual/image materials is photography. Today, photography is becoming ubiquitous, and incorporating photography into classroom instruction is gaining momentum (Peabody, 2013; Schell et al., 2009). Nevertheless, detailed analyses of the pedagogical values of photography are relatively elusive (Chai, 2019). The purpose of this paper is to fill this knowledge gap by examining the use of photovoice and its impact on visual literacy. More specifically, this study aims to provide an active learning environment for students using photovoice methodology through a project called 'Reading and representing the landscape of globalization in the local area through photovoice.' This project discusses how learning to represent the landscape of globalization in the local space can help students improve balanced visual literacy competency in image creation (input) and interpretation (output), and we derive the implications of photovoice as a pedagogical tool.

GEOGRAPHY AND LEARNING TO READ LANDSCAPE

Meaning of Landscape

Interpreting landscapes is an important way to learn about geography (Birdsall, 2003; Hermann, 1996; Medley & Gramlich-Kaufman, 2001; Rawding, 2007). Landscape is a basic organizing concept in not only geography but also various fields such as art and architecture, environment, planning, and geoscience (Morin, 2009). In geography, the concept of landscape expands not only to the visible natural state of a specific location but also to the cultural landscape in which human activities are embodied and expressed on the natural landscape (Cosgrove, 1985; Lacerda, 2020; Mitchell, 1996; Morin, 2009). In particular, according to Morin (2009), a landscape is generally referred to as an ideological or social process that helps to produce (reproduce) or challenge existing social practices, lived relationships, and social identities, as well as physical areas with visuality seen from a particular location.

Landscape perception has been studied in several fields, especially since the 1970s (Zube et al., 1982). One example of attention toward young populations' perspectives on landscape was the land use-UK project of 1996, which revealed adolescents' concerns about pollution, housing density, and traffic increases through an array of techniques involving mapping surveys, questionnaires, and interviews (Robertson, 1995; Robertson et al., 2003; Walford, 1997). Other studies have adopted graphical methods to assess these perceptions (e.g., Thommen et al., 2010).

The landscape can be said to represent a geographic vision of space (Lacerda, 2020). Landscape is important as a medium that provides opportunities for direct or indirect experience in understanding a place. Further, it is a concept that cannot be distinguished from the region when explaining the characteristics of a place: First, the landscape is a representation of the conscious world of the people living in an area, and it transforms an achromatic region into a place with meaning. The landscape we see is the outcome of a complex series of evolving, dynamic, and changing processes (Rawding, 2007). Second, the landscape as a material civilization that occupies a place consists of a thick "strata of meaning," as a text that reflects the various thoughts, beliefs, and value systems of the humans occupying each region, and it can be understood as the best expression so that placeness of each place can be visually confirmed. Third, unlike before, the current understanding of landscape implies that it should be read with "thick description" rather than a superficial level of "thin description" (Ralph, 1976, p. 31).

Cultural landscape studies are neither new nor original. Landscape geographers have long recommended looking beyond the simple facades of buildings (Mitchell, 1996) to see the multi-layered meaning of human activity, the creation and control of the environment surrounding us.

Learning Geography Through Landscape

As an important element of learners' living world, not an object that is isolated from learners' lives, landscape has meaning not only in terms of learners' landscape but also as the totality of experiences shared by people who have lived and continue to live in the

area. Therefore, if the understanding of the landscape and the learner's understanding of the living world conflict, the learner will experience alienation from the educational content and will not be able to actively participate in educational activities. Therefore, it is necessary to pay attention to the local landscape where learners live. This is also why photovoice activities are suitable for learning geography through the landscape.

This study demonstrates how approaches to learning about landscapes, especially in terms of how and why landscapes change, can reconfirm the suitability of students' daily lives and the geography subject. In particular, the philosophy of social constructivism lies at the heart of the approach to geography learning using landscapes. Students learn about the world by understanding things based on their previous knowledge and existing ways of thinking (Taylor, 2004). Moreover, individuals see and understand the world differently. As each individual acquires new knowledge, they effectively reconstruct (to a minimum extent) their existing knowledge frameworks and accommodate them into this new information, rather than simply joining them to the new knowledge. th individuals' constructions of the world are constantly modified by new things and ways of thinking (Roberts, 2003; Taylor, 2004; Vygotsky, 1978, 1986). Through landscape learning, students can better understand the social and natural processes that create the space in which they live. And while working with classmates, students can recognize different perspectives and projections of the landscape (Lacerda, 2020).

According to this constructivist perspective, our understanding of landscapes is greatly influenced by the landscapes we occupy in our daily lives and by media representations of landscapes experienced indirectly through secondary information heard by others, such as friends, relatives, and teachers. Therefore, it is important for teachers to provide a conceptual framework for interpreting landscapes, as students directly or indirectly encounter them by chance (Rawding, 2007). When acquiring such a conceptual framework, it is then possible to scaffold learning so that students can interpret less familiar and more distant places.

In this study, the photovoice methodology is applied as a conceptual framework for reading, representing, and interpreting (meta-representation) the landscape for classroom or fieldwork practices. Thus, the intention of the photovoice project in this study is to provide a path for landscape interpretation so that students can read the landscapes in their present and future lives. In addition, this photovoice project activity encourages students to contemplate thinking and metacognition and to be more reflective to develop higher-order thinking.

PHOTOVOICE

A Methodology for Representing Landscape

Learning using landscape photography is the best way to directly or indirectly examine the appearance of the place we live in, as landscape photography is an effective medium that best reveals the characteristics of a place. However, landscape photographs provided by various media, including textbooks, often comprise decontextualized information that is far from the real life in which the learner is situated. Therefore, a new conceptual frame is needed for learning to describe, analyze, and evaluate the landscape of the real world in which students live. With these points in mind, this study focuses on the photovoice methodology, as starting with the view from any window can help assert the relevance of the study of landscape.

The photovoice methodology is useful for accessing geographical concepts such as landscape. This is because it can enable students to represent reality in different visual and verbal ways. Photovoice combines visual and verbal data to provide interesting insights into how the iconic nature of landscape representation can be expressed through visual images (photos) and words (spoken and written languages) (Bauer & Gaskell, 1999; De Rosa & Farr, 2001). The combination of the words "photo" and "voice" reflects how researchers jointly consider visual and verbal facets, thus acquiring a broader understanding of landscape through the use of multiple media (Bauer & Gaskell, 1999). If a teacher asks students to complete photovoice work on a landscape of globalization represented in the local space where they live, the students will probably produce different versions of the same reality. Each student has his or her own perspective on the landscape of the city where they live, because each student sees this space in his or her own way (Lacerda, 2020). However, there is a relative dearth of research that combines visual data and verbal accounts produced by the same participants. As a method, photovoice contributes to filling this gap in the exploration of landscape (Sarrica & Brondi, 2020).

Photovoice is a qualitative participatory research methodology that provides participants with a camera to record the realities of their lives. Notably, it is an approach that integrates photography and narrative and participatory behavior (Wang, 1999, 2006; Wang & Burris, 1994, 1997). Participants are given the opportunity to express their world through their own photos and narratives. Consequently, the combination of visual and verbal data can be used to assess specific stages of cognitive coping processes, such as naming and classification in the anchoring process and selective retention in the objectification process. It also consists of mechanisms by which participants participate in group discussions (focus group discussions) about the photos

they have taken and their narratives and present them to public forums (exhibitions) (Wang & Burris, 1994).

Recently, photovoice methodology has been frequently used in fields such as health, social welfare, sociology, and, increasingly, education (Chio & Fandit, 2007). For this study, we recruited adolescent participants in an educational context and implemented the "reading the landscape of globalization in Daegu" project using photovoice. This research aims to help students better understand their vivid experiences of globalization by providing them with real-world experiences of using photovoice as a research method as well as the opportunity to put what they have learned into practice. Overall, this study explores whether students examining globalization from their own perspective can lead to greater empowerment and critical awareness in their lives.

A Methodology for Improving Visual Literacy and Meta-Representation

When representing the landscape through photovoice, the participant is both a photographer who takes a picture of the landscape and a reader who reads it. The researcher presupposes that participants can simultaneously cultivate the ability to not only represent but also read the landscape through photovoice as well as, ultimately, acquire the skill of visual literacy. The ultimate purpose of the photovoice methodology is to practice social justice and social change. Furthermore, photovoice is often referred to as "visual presentation in action," which means that when it is used as a pedagogical tool, it similarly becomes a tool for students to improve their visual representation skills (Breny & McMorrow, 2021).

While literacy, in general, is used to describe our ability to make meaning from written or printed text, "visual literacy" represents our ability to do the same from images; it includes how we gather information, and interpret the story, of images and photographs that we see. Moreover, visual literacy is increasingly seen as an essential ability for students (Chai, 2019; Ervine, 2016). In this paper, visual literacy refers to a set of skills parallel to alphabetical literacy, i.e., visual reading, writing, and thinking. These skills entail the ability to interpret/understand (read), create/communicate (write), and think, all in terms of images (Kędra, 2018). Research shows that the use of visual materials in teaching enhances student learning, especially through the decoding of visual messages and the production and encoding of visual materials as a communication tool (Stokes, 2002).

Recently, studies on the output aspect of visual literacy have gradually increased (diSessa & Sherin, 2000; diSessa et al., 1991; Nemirovsky & Tierney, 2001). The ultimate goal of these studies is to identify the types of knowledge, experiences (e.g., experiences in creating images in the past), functions, and meta-knowledge (concerns about which type of photograph is appropriate) that students use to generate new forms of image data. Meta-representation competence is meta-knowledge related to the creation and utilization of graphs or images (Azevedo, 2000; diSessa, 2004; diSessa & Sherin, 2000; Kozma & Russell, 2007; Lee, 2011). It is the ability to use new types of representations without education, select the most suitable representation for a specific task (situation), and explain why the selected representation is suitable for performing the task. In other words, it refers to knowledge of an overall and integrated character that encompasses both the interpretation and creation of images. Therefore, we can assume that the photovoice activity can improve students' meta-representation competence through the two processes of generating and interpreting photos. The relationship between the photovoice methodology and meta-representation arises from the idea that photographs can represent landscapes and that narratives about those photos can lead to meta-representation. Recently, more and more studies have investigated methods to strengthen students' visual literacy through photovoice (Chai, 2019), but few have revealed the relationship between representation competence and meta-representation competence.

To improve their interpretation ability within visual literacy, students can develop a critical eye by reading visual materials and interpreting them from their own perspective. In addition, by developing the generation ability within visual literacy, students can contemplate what type of representation they should use and engage their geographical imagination when creating new types of graphic materials. In this process, students can develop meta-representation competencies and improve cognitive flexibility, creativity, and higher-order thinking skills, including problem-solving skills.

METHOD

Research Topic and Participants

In this article, we propose photovoice as a method for investigating the landscape of globalization in the local area. Thus, this study focuses on landscape interpretation using the photovoice methodology centered on the theme of "globalization" in the local space where students themselves live. The main reason behind this choice is that photovoice, by combining visual and verbal data in individual and group tasks, enables the examination of images and their use in local interactions, that is, the content and processes involved in the making of globalization landscapes.

According to Dickens (2017), landscape learning is usually not encouraged or taught in the context of meaningful fieldwork for urban landscapes but rather devoted to solving problems within the classroom

Table 1. Stage of the class applying photovoice

Photovoice stage	Class stage	Date & session	Contents
Education	Theoretical introduction	2022.10.9. 1st session	• Purpose of activities and photovoice methodology • Guidance on precautions when taking photos • Making a group
Documentation	Brainstorming		• Brainstorming: Identifying potential images of globalization (drawing mind maps)
	Fieldwork	2022.10.9.-10.16.	• Capturing the globalization landscape in a local space: Taking pictures - Refer to topic and question prompt (SHOWeD)
Narration/ ideation	Data analysis	2022.10.20. 2nd to 4th sessions	• Photo selection, contextualization, categorization - Application of a three-step analysis method proposed by Wang and Burris (1997) • Create narrative (see SHOWeD) • Group discussion: Various interpretations and discussions of the landscape, selecting group photos, correcting the narrative • Create presentation materials (group activities)
Presentation	Presentation	2022.10.20. 5th session	• Group presentation and posting on the website of related organizations (presentation of alternative)

environment. Students are still bound to the classroom environment, and they lack opportunities to explore various aspects of globalization in the world they live in or to think and practice critically about the impact of globalization. For this study, we designed a project to explore the landscape of globalization in the local space where learners live by using photovoice to explore the macroscopic concept of "globalization" away from the decontextualized globalization knowledge learned in the classroom. The key questions presented to students in this project are as follows. "Globalization and I/our area: What is the landscape related to globalization in my high school and the local area around it, and why did you choose it?"

This study was launched as one of the programs of the knowledge development committee hosted by the career advancement department of a high school located in Dalseo-gu, Daegu, where the researcher belongs. The students who participated in the study recruited 20 applicants among the first and second graders of the high school, but finally, 18 students (10 students in the first grade and 8 students in the second grade) actually participated.

Procedures and Detailed Activities

On October 20, 2022, from 16:00 to 21:00, the photovoice project was held over a total of 5 sessions. One week before this class, the participants were presented with assignments and provided a week to perform the assignments. This class, which featured the photovoice project, consisted of a theoretical introduction, brainstorming, fieldwork, data analysis, and presentation (**Table 1**). Students recognized and analyzed their urban landscapes by reading the landscape as text using photovoice and critically viewing the globalized landscape of their area.

Table 2. Question prompts to draw narratives about photographs (SHOWeD) (Wang et al., 1996)

No	Question
1	What do you ***S***ee here?
2	What's really ***H***appening here?
3	How does this relate to ***O***ur lives?
4	***W***hy does this problem/situation, concern, or strength exist?
5	What can we ***D***o about it?

Because this photovoice class integrates various theoretical ideas within geographical research, this activity reaches the highest achievement with students after they have been exposed to urban, economic, and cultural concepts of geography (Dickens, 2017). The photovoice activity process proceeds sequentially, but the activity procedure may overlap. Each of the procedures presented in **Table 2** may be affected by various conditions, such as physical and temporal environments. To complete this photovoice project, each student must do the following:

First, in the introductory stage, students are guided by teachers on the photovoice methodology and precautions for photography in the theoretical background class. Second, students brainstorm the landscapes of globalization they have experienced using mind maps to identify potential images that can be linked to the 'globalization' they learned in class. Third, through actual photovoice-based fieldwork, students will attend observations and analyses of major streets and landscapes around schools to capture the landscape related to globalization in their local space. Students take as many photos of the landscape as they wish in at least 10 places. Fourth, students return to the classroom, select three photos that best express the topic, choose a title, and write a narrative for each photo. When writing a narrative, it is recommended to understand the meaning behind it rather than provide an intuitive description of

a photographic image while answering SHOWeD questions (see **Table 2**) (Wang et al., 1996) and to think and analyze critically with consideration of social, cultural, political, and environmental contexts.

After individual activities are completed, students will be able to discuss various interpretations of the same cultural landscape through team discussion activities to understand how individual perceptions vary. After that, students select four photos that they think best represent the landscape of globalization for each team and correct and supplement the narrative by answering SHOWeD questions. At the end of the photovoice activity, students write a short reflection report on their experience of the photovoice task. Through these activities, students can visually and sensibly check the globalized landscape aspect of their area and critically interpret the ideology behind the landscape as an object.

Through the photovoice project task, students will record the landscape of globalization that they have observed in person with a picture and explain their picture. As the final product, students will connect with the big concept of globalization in a written narrative and share their interpretation of the landscape of globalization in the local environment where they reside. Because the photovoice activity is a subjective qualitative inquiry activity, the evaluation is conducted based on the rubric.

For our study, students filled out a pre- and post-questionnaire regarding the photovoice project. Students wrote their impressions after participating in the photovoice class at the end of the post-questionnaire. These questionnaires were conducted to derive the implications of photovoice as a pedagogical school by comparing students' satisfaction with high-school geography classes before and after photovoice activities.

Data Collection and Analysis

The advantage of using photovoice as a tool for program assessment lies in its unique benefits for qualitative research. In particular, qualitative-based research that employs photovoice, reliability and validity are achieved by increasing the methodology's credibility, authenticity, transferability, and consistency (Appleton, 1995; Fade, 2003). Moreover, triangulating data collection methods through the use of photographs and narratives, focus groups, and member checking increases the method's transferability. Photovoice achieves authenticity and credibility because the methodology relies on the participation of the target population (i.e., students) whose photographs and narratives represent their lived experiences, and consistency is achieved by following a stable protocol (Wang & Burris, 1997).

For this study, we used participants' photovoices, or photographs and narratives, as data collection methods. The researcher generated the data used in the study and analyzed the data to investigate how the participants perceived the issue of "the impact of globalization on local landscapes." In this photovoice project, the participants were instructed to take, choose, and interpret pictures of the globalized landscape that has been reproduced in Daegu, Korea. Then, the students responded based on their local experiences in a globalized context. The project was driven by an unexpected outpouring of passion from the students, which led to a new level of individual and collective responsibility and participation.

Meanwhile, the photos taken by the participants and their narratives were used in this paper with their permission. Moreover, the students' narratives have been translated from Korean to English, and the names of the participants mentioned in this paper are pseudonyms. To protect the confidentiality and anonymity of the participants, each student was assigned a coded number (e.g., S1 and S2).

When analyzing the data, the researchers applied grounded theory as described by Charmaz (2006, 2014). Grounded theory is a systematic and iterative set of methods aimed at constructing theories "grounded" in the data (Charmaz, 2014). The researchers coded all the photographs, narratives, and data collected through interviews and produced by the participants in the order of open coding, axial coding, and theoretical coding in three. Coding is an important step in the analysis process because it constitutes "a pivotal link between collecting data and developing creative theories to explain that data" (Charmaz, 2006, p. 46). Through the coding process, the "conceptual abstraction of data and recombination of data take place" (Holton, 2010, p. 265).

A total of 162 photographs and their narratives produced by the participants about the various aspects, causes, and effects of globalization reproduced in their local landscape were analyzed using grounded theory. In addition, in-depth interviews with students and their reflection journals were analyzed to further refine the results. In the initial analysis, 10 themes appeared: economic globalization, financial globalization, cultural globalization, globalization of information and communication technology, globalization of education, globalization of language, globalization of infectious diseases, globalization of symbols and signs, environmental globalization, and globalization of religion.

However, these themes were not completely separate but rather overlapped to some extent. Thus, through re-analysis, some themes were combined, and six themes emerged: economic globalization, cultural globalization, globalization of education, technological globalization, globalization of symbols and signs, and environmental and health globalization (**Table 3**). Nevertheless, there inevitably remains some overlap between these six themes.

Table 3. Six themes and subcategories

Themes	Subcategories
Economic globalization	• One product, several countries, and multinational corporations • Globalization of finance: our lives by trade, exchange rates
Cultural globalization	• Inflow of Western culture: Western architecture, religion, anniversary • Globalization of food culture • Globalization of popular culture (especially the Korean Wave) and sports
Globalization of education	• Foreign-language education from an early age • Global education
Technological globalization	• Platforms, interconnected worlds • Remote education
Globalization of symbols and signs	• Symbols and signs of globalization, English: English signboards and apartment names • Various languages of the kiosk
Environmental and health globalization	• Health promotion and advertising for foreigners • Environmental pollution

FINDINGS

Economic Globalization

The landscape-of-globalization theme that participants focused on the most in their local space was economic globalization. Economic globalization is further sub-categorized into 'one product, several countries, and multinational corporations,' and 'globalization of finance: our lives by trade, exchange rates.'

One product, several countries, and multinational corporations

This sub-category is further subdivided into 'one product, several countries,' 'globalization of the food industry,' 'globalization of the automobile and IT industry,' and 'globalization of the sports fashion industry. For example, some participants confirmed by reading the packaging of the products they routinely consume that the raw materials for making the products (goods) were produced in several countries, and they presented this as an example of a landscape of globalization. Among the participants, S1 provided the names of several countries listed as countries of origin on cereal packages on the shelves of large supermarkets, which captures the aspect of multinational companies importing raw materials from various countries. Moreover, S1 criticized the health threat caused by the use of preservatives due to the long-distance shipping of raw materials and the reality that workers are not paid a fair price, and they suggested a plan to sponsor fair trade products or products produced by domestic companies as an alternative. Many participants other than S1 also captured globalization by checking the country names on the packaging of products that students routinely encounter, such as cosmetics, hand cream, chalk holders, musical instruments, jellies, and snacks provided at school lunches. Participants explained that they recognized the landscapes that represented globalization after they easily completed photovoice activities in the familiar landscapes around them, not abstract landscapes in distant places.

Second, some participants paid attention to the globalization of the food industry. In particular, the emergence of multinational corporations has had a remarkable influence on the types of landscapes. Fast food restaurants such as McDonald's and coffee shops such as Starbucks, which are common on the local streets where we live, are representative examples. Among the participants, S3 captured an image of stores of multinational beverage companies. Although the participant was previously not aware of globalization, even though he often used Starbucks, through photo voice activities, he recognized globalization at Starbucks and paid attention to the labor exploitation of workers producing coffee beans. In addition to S3, several participants criticized the tyranny of multinational corporations by photographing the landscape of McDonald's and Starbucks, and they suggested the use of domestic companies' stores as an alternative.

Third, participants also paid attention to the globalization of the automobile and IT industry. Among the participants, S2 captured globalization in foreign cars (Benz, BMW) parked in the apartment parking lot. Unlike in the past, when domestic cars were the standard, after globalization, imported foreign cars are now routinely encountered on local roads. Further, as a small number of global automakers now dominate the automobile market, the cars that drive on local streets are increasingly manufactured by this small group. S2 was concerned about the damage to the domestic automobile industry, pointing out that the social values formed by the influence of the external environment were reflected in the gaze toward foreign cars that can be easily seen on local streets. Therefore, S2 emphasized the necessity of domestic car consumption as an alternative.

Meanwhile, participants similarly paid attention to the reality that many people around them prefer Apple and its brand image to Samsung, a domestic company. To this point, several participants, including S4, photographed products made by Apple, a multinational

Narrative: This is a picture of an Apple phone I use. These days, many people around me use Apple products, which I think is an indicator of globalization. I use an iPad, and my brother also uses an iPhone. Using Apple's cell phones, of course, I buy other electronics from Apple. Apple products have many advantages because the design is really pretty and the photos are taken really well. Since Apple competes with Samsung, a Korean company, using Apple has a negative impact on Korea. I think we should use a lot of electronic products made by Korean companies, but it's a pity that we can't (S4).

Figure 1. Apple in my hands (Source: Field study)

IT company (**Figure 1**). Apple's products have affected the landscape of local streets and school classrooms, as products from domestic IT companies were previously the standard in these environments. Many participants, including S4, pointed out that it is easy to capture images of people using Apple iPhones, iPads, and AirPods in local streets or school classrooms, as well as stores selling Apple products. Although students propose the use of products from domestic companies as an alternative to the reality of using Apple, they still prefer to buy Apple products over Samsung.

Lastly, participants also paid attention to the globalization of the sports fashion industry. For example, they showed interest in the logos of various sports brands (Nike, Adidas, New Balance, etc.). This theme pertains to the reality that the entire manufacturing process of the clothes and shoes we wear does not occur only in Korea. Among the participants, S18 captured the names of the brands they were wearing or owned. In addition to S18, several participants identified globalization by focusing on shoes and clothes by multinational sports companies that their friends wear in class. To this point, some participants pointed out the labor exploitation of workers at multinational corporations, including Nike.

Globalization of finance: Our lives by trade, exchange rates

Regarding the second sub-category of economic globalization, 'globalization of finance: our lives by trade, exchange rates,' global economic trends advocating free trade have accelerated the phenomenon of globalization. Barriers to trade have been lowered, and interactions between different parts of the world have increased. With the progress of economic globalization, it is no longer possible for countries to manage and control their economies.

Among the participants, S2 noted the exchange rate to be considered during trade on the local bank's bulletin board labeled 'today's exchange rate,' which reflects that economic exchanges have become frequent due to the rapid spread of globalization. S2 observed that the exchange rate of goods, services, capital, labor, technology, and knowledge moved rapidly without the interference of the state, which demonstrates a globalization phenomenon in which each country and region of the world are integrated very closely into one economic sphere. In the trend of globalization, exchange rates matter not only to companies seeking profits through trade but also to us in our daily lives. Furthermore, S2 pointed out that Korea, which has a high degree of dependence on foreign countries, is greatly affected by exchange rate fluctuations and that serious economic crises occur as interdependence between countries and regions increases. Therefore, S2 suggested bold innovation and research by domestic companies, the localization of core technologies, and the development of overseas resources as alternatives.

Cultural Globalization

The second most mentioned landscape-of-globalization theme by the participants in their local space can be labeled 'cultural globalization.' Notably, this theme is influenced by politics, economy, capitalism, etc.; it overlaps with these areas and occurs in combination. For this study, cultural globalization is further subcategorized into 'Inflow of Western culture: Western architecture, religion, anniversary,' 'globalization of food culture,' and 'globalization of popular culture (especially the Korean Wave) and sports.'

Inflows of Western culture: Western architecture, religion, anniversary

The first subcategory of cultural globalization pertains to the introduction of Western cultures to the local area in Korea in aspects such as Western architecture, religion, and anniversaries. It encompasses dynamic cultural interaction, exchange, and integration. Nowadays, buildings, sculptures, and decorations with exotic characteristics are common in Korean cities. Among the participants, S9 captured globalization in Western architectural buildings in our local area and interpreted this as a positive aspect in that we can easily

Narrative: This photo was taken of a Myanmar temple in a local area where I live. The temple was built to support the religious activities of Myanmar workers living in Korea. This allows us to easily understand and share various cultures, respect the religions of foreign workers working in Korea and have a positive aspect of their religious freedom. On the other hand, cultural conflicts may arise because local residents of Korea living near Myanmar temples do not understand cultural differences. Therefore, we should try to remove prejudice against other religions (S2).

Figure 2. Myanmar Temple (Source: Field study)

Narrative: When people eat fast food, they naturally visit McDonald's the most. McDonald's is anywhere in the world and the most accessible fast food restaurant around us, and we can easily settle a meal there. It shows globalization in that we are eating food from other countries in our country. Its positive effects are being able to eat quickly, being able to eat food from other countries, and its negative effects can be bad for our health if we use it too often. Also, as McDonald's spreads to many cities around the world, fast food culture in different parts of the world becomes similar. I don't think we should lose the identity of our culture (S18).

Figure 3. McDonald's (Source: Field study)

see Western-style buildings in our local area without needing to go abroad. In addition, this participant recognized Western-style architecture as creating a more sophisticated building than our architecture.

Moreover, S2 photographed a Myanmar temple where the religious activities of Myanmar workers staying in Korea take place (**Figure 2**). In this context, globalization is positive in that it allows us to access various cultures and grants religious freedom to foreign workers residing in Korea. However, S2 was concerned that conflict could arise when we do not understand cultural differences. As an alternative, he suggested the need to look at other religions without prejudice.

Meanwhile, Koreans celebrate New Year's Day and Christmas in addition to our traditional holiday, Lunar New Year. In other words, we accept foreign cultures and experience the changes brought about by them while maintaining our traditional cultures. At the time of this study, Halloween was just around the corner for the participants to perform their photovoice tasks. Accordingly, many participants, including S10, were interested in standardized Halloween items that were readily available at our local stores during this time. S10 observed that there is a positive aspect in being able to experience other countries' cultures through festivals such as Halloween, but they critically viewed the environmental pollution and corporate marketing produced by such celebrations, such as items used for festivals and large amounts of garbage discarded after events.

Globalization of food culture

The second subcategory of globalization of culture relates to the globalization of food culture. The meaning of a plate of food on the table transcends material meaning and encompasses history, society, the local and global economy, exchange and trade, agriculture and processing, and taste and culture. Many participants captured globalization in foods such as ramen, pasta, sushi, pizza, Starbucks, and rice noodles

S9 took the picture in **Figure 3** at a local malatang store. Malatang is a Chinese dish originating from Sichuan Province in China and made through Dongbei Province. S9 explained that although people may like or dislike malatang, enjoying it is a trend among teenagers and young people in their 20s, and people can be left out if they do not eat it. Thanks to globalization, we can routinely experience it at our tables and in local restaurants to enjoy foreign food without special effort.

In particular, the United States has succeeded in globalizing its food by maximizing capital and economic efficiency. This has resulted in the emergence of the Americanized world, where McDonald's culture has become a ubiquitous and dominant discussion in globalization and cultural geography. To this point, S18 captured globalization at McDonald's, a representative fast-food restaurant (**Figure 3**).

Fast-food restaurants such as McDonald's are a representative example of the spread of American consumption culture to the world. S18 explained that with the globalization of McDonald's, we can easily and quickly find a meal and have the advantage of being able to enjoy it anywhere in the world. On the other hand, S18 emphasized the subjectivity of our culture and the uniformity of food culture, which can lead to monotonous scenes in different parts of the world as well as damage our health.

Globalization of popular culture (especially the Korean Wave) and sports

The third subcategory of cultural globalization–'globalization of popular culture (especially the Korean Wave) and sports,'–appeared in this study in photos of K-pop idol videos on YouTube, a leading video-sharing platform; K-dramas on Netflix; overseas soccer videos; and Japanese animation promotional flyers in cinemas. While the globalization of pop culture expanded the global market share of the dominant Western pop culture, at the same time, it created various hybrids and laid the foundation for the diversification of pop culture. With the development of media, especially online video platforms, interest in Korean culture is increasing worldwide

Among the participants, S4 presented a YouTube video of K-POP idols (SEVENTEEN) representing the Korean Wave as an example. These YouTube photos were captured because they depict the experience of seeing more comments from foreigners than from Koreans on the video. S4 noted that globalization has a positive aspect in that it allows Korean culture to be promoted globally through YouTube, a video-sharing platform; however, sometimes, conflicts can arise in cases where S4 criticizes it as different from her culture. Accordingly, she suggested the need to make Korean culture more known to the world and reduce negative effects.

An indispensable medium in the globalization of culture is the "media" in which various cultural products are distributed and consumed. It is no exaggeration to say that the key to the structural change of the media industry has been the globalization of the over-the-top platform industry amid the accelerating digital transformation in the era of the fourth industrial revolution. Among the participants, S18 captured a foreigner copying *Squid Game*, a Korean drama that has aired on Netflix, on YouTube. He raised concerns about the way our pop culture is broadcasted on American platforms like Netflix, an online video service in the United States, and not on our native platforms, even though Korean dramas enjoy tremendous popularity on Netflix and people all over the world take pride in our culture. In response, he suggested the activation of native platforms as an alternative so that our cultural content can be aired on native platforms.

Meanwhile, some of the participants captured a screen in which Korean people were commenting on overseas soccer videos. Sports can be enjoyed simultaneously by people all over the world through the media. In particular, the use of global broadcasting for events such as the Olympics and World Cup confirms that each country's people are members of the world. Regarding sports globalization, from a positive standpoint, sports events or specific events in a specific region are transformed into relationship-oriented phenomena where viewers can acquire relevant information and knowledge about the world beyond their existing locality. However, in terms of negative aspects, sports globalization has also been considered a main culprit in facilitating cultural uniformity and the spread of monoculture at the global level as an agent of cultural imperialism, as well as the diminishing of cultural diversity around the world by the cultural capital of powerful countries such as the United States.

Globalization of Education

The third theme of globalization found in the participants' local landscapes was named 'globalization of education.' Participants easily captured the landscape of globalization related to education in schools and classrooms and connected it to their experiences. In particular, they focused on foreign-language education centered on English and various kinds of global education promoted by schools. They also criticized the problems of Korean education from the perspective of globalization.

Foreign-language education from an early age

Many of the participants identified English and second-language education as representing the globalization of education. In the ongoing process of globalization in various fields, including economic, political, and cultural dimensions, it is clear that the means of communication between various countries are gradually being integrated into one, and globalization has eventually encouraged the standardization of English, the first world's language, for smooth communication.

Some participants took pictures of the landscape of English education to explain the impact of globalization on Korea's public and private education. Some also expressed concern about early English education and entrance-exam-oriented English education in Korea. For example, S6 captured globalization through his picture of the sign of the English academy, which can be easily found on the street in front of his house and asked if there was anyone who had never attended an English academy. He criticized that although there is a positive aspect of learning languages through English education,

Narrative: It is an English kindergarten located in Wolseong-dong, Dalseo-gu, Daegu. As exchanges between countries became more active, the language of English became important, and English kindergartens were created to educate students early on. With globalization, more and more parents are trying to give English education from an early age as English becomes a part of our lives. There is a positive influence for children to learn other countries' cultures more intimately through other languages. However, as the proportion of other languages has increased than that of their native languages, there is less time to learn their native languages properly, and more and more children are unable to follow the spelling of their native languages properly. In addition, they are forced to provide English education from an early age, experiencing stress from studying early on (S13).

Figure 4. English kindergarten building (Source: Field study)

Narrative: This is a picture of a signboard showing an example of the application of IB education in the middle school I graduated from. I think this is related to globalization because Korea seems to be an attempt to follow Western education. This is an example of how globalization is affecting education in Korea. The advantage of such globalization is that it was possible to move toward a process-oriented direction by applying education from other countries to education in Korea that values results. On the other hand, as a negative effect, it is a show-type education that does not fit with Korea's university entrance examination system, and because both the results and processes are emphasized, the burden on students and teachers only increased. In order to solve this problem, rather than trying to follow Western education, it is necessary to draw students' participation in accordance with the situation of education in Korea (S6).

Figure 5. Is IB the right thing for education in Korea? (Source: Field study)

the original purpose of English education in Korea has been changed to center on entrance exams rather than teach smooth communication. Accordingly, he suggested a transition to communication-oriented English education through public education as an alternative.

As a result of social demands to cultivate talented people who can adapt well to the global economic system amid rapid globalizations. Given this trend, early English education is common in various places in Korea. Indeed, in the private education market, early English education is becoming a necessity, not an option. S13 photographed an English kindergarten building in the local area (**Figure 4**). She raised concerns and criticism about the flow of education that focuses on foreign languages rather than native languages, as well as the reality of Korean education that forces students to learn English from an early age, even though there is the positive aspect of being able to learn the languages and cultures of other countries more closely through early English education.

On the other hand, some participants focused on English, Chinese, and Japanese textbooks, capturing globalization in the reality that public education includes these foreign-language subjects. While S12 noted the positive aspect of being able to learn various languages and cultures in the compulsory curriculum, they pointed out that the burden on students' studies of receiving private education in Chinese and Japanese in addition to English is a problem. As an alternative, he suggested opening after-school classes or expanding public education through mentor–mentee activities.

Global education

Along with globalization, a Korean school curriculum that has prioritized recently is global education, as the progress of globalization requires a school education that underscores understanding and respect for the diversity of other cultures.

Some participants paid attention to globalization in the educational reality that they have experienced or are experiencing in their elementary, middle, and high schools. S6 paid attention to international baccalaureate (IB), an internationally recognized curriculum organized by the International Baccalaureate Organization, a Swiss non-profit education foundation (**Figure 5**). He expressed concern that although the transplantation of IB into Korean education is positive in that it highlights process-oriented education rather than results and education that accords with international standards, it may increase the burden on students. Accordingly, he insisted that the Western education method should be operated given the situation of education in Korea.

Narrative: This photo captures the main page of an overseas direct purchase site on the Internet. I captured this photo to show that a lot of overseas direct purchases are being made due to the development of information and communication technology. I chose this photo because I thought that overseas direct purchases illustrate globalization because it is common to purchase products from other countries at a low price recently, and because you can easily purchase products from other countries at home without going abroad in person. The advantage of overseas direct purchases is that we can easily order products from overseas, receive products from overseas and obtain products that are not available in Korea easily. On the other hand, the disadvantage is that if we use overseas direct purchases a lot, our less competitive industries may be damaged. Also, environmental pollution may occur during the process of long-distance delivery. Therefore, I think we should indiscriminately purchase overseas products because they are cheap and convenient. I think we should purchase more Korean products so that we can have the competitiveness of the domestic industry (S5).

Figure 6. Overseas direct purchase (Source: Field study)

Meanwhile, transnational migration with globalization has created a multicultural society in which members of various races and ethnic groups coexist in certain regions. In the educational field, as the number of students who speak different languages and come from different cultural backgrounds increases, an open attitude is required to embrace other ethnic groups and other cultures. S13 paid attention to the multicultural education handouts posted on the classroom bulletin board, recognizing globalization in the experience of transferring from other countries or seeing students with parents of different nationalities as well as in the multicultural education conducted to improve awareness of multicultural families and other cultures. However, although the understanding of other cultures increases through multicultural education, S13 also lamented the reality that multicultural students are still having difficulties and cannot participate fully in school classes. Therefore, she saw the need to help multicultural students adjust to school life through mentor–mentee activities or after-school classes.

Technological Globalization

Globalization is made prominent by technological changes that facilitate multinational flows of media, information, people, and goods that, in turn, enable the emergence of globally interconnected and convergent worlds associated with globalization (Allen & Hamnett, 1995). The fourth theme of globalization in the participants' local landscape is technological globalization, which refers to the phenomenon in which millions of people are interconnected thanks to the power of the digital world through platforms such as Facebook, Instagram, and YouTube. The Internet is a major contributor to globalization, and it is technically not limited to other fields but rather facilitates the cultural exchange of art. Technological globalization affects all areas of the economy, culture, and education; therefore, there is an overlap with the previously mentioned globalization themes of economy, culture, and education in the landscape.

Platforms, interconnected worlds

As mentioned earlier regarding the theme of globalization of culture, the foundation of popular culture and communication has shifted to online platforms. With the development of IT technology, especially smartphones and the Internet, we can communicate with people from all over the world in real time through platforms such as Facebook Messenger, Instagram, and YouTube. Participant S7 recalled that he had recognized globalization in his experience of sharing overseas cultural content and communicating with others through YouTube, a video-sharing platform serviced by Google. He explained that with the development of YouTube, it has become easy to access diverse cultural content from various parts of the world, and although there are positive aspects of experiencing different cultures, our experiences can be biased toward cultures we encounter frequently, which can lead to relatively less interest in Korean culture.

Consumers in this era of globalization have become accustomed to consumption activities in online markets around the world due to the establishment of logistics systems and the simplification of payment methods. Noting this phenomenon, participant S5 captured the main screen of Amazon (**Figure 6**). With the development of information and communication technology, she interpreted this scene in which products from other countries can be easily purchased at low prices at home without needing to go abroad directly as representing globalization. She pointed out that while overseas direct purchasing, which has increased because of technological globalization, has the positive aspect of an expanded product selection, it entails problems such as diminishing Korean industry, which is not as competitive, and environmental pollution in the delivery process.

Accordingly, she suggested purchasing domestically produced products and strengthening the competitiveness of the domestic industry as an alternative.

Remote education

Meanwhile, the global spread of infectious diseases such as COVID-19 has also promoted the globalization of information and communication technology. Strong controls, such as social distancing and restrictions on outside activities to stop the spread of powerful infectious diseases, have controlled our daily lives and limited face-to-face exchanges with others. During the time of COVID-19 restrictions, people communicated more through social networking services, distance education was conducted in schools, and work was completed through real-time video conferencing. Noting this context, S16 took a picture of the website of the foreign-language education service where he took the class himself. He recognized globalization in the context of learning foreign languages by registering for an online education program. He raised the need to prepare alternatives for the underprivileged in education and highlighted the negative aspect that education may be provided unevenly due to gaps in information technology, although he acknowledged the positive impact of learning foreign languages through online education programs without registering for academies or going abroad in person.

Globalization of Symbols and Signs

The fifth theme of globalization in the local landscape was named 'globalization of symbols and signs,' and its subcategories are 'symbols and signs of globalization in English: English signboards and apartment names' and 'various languages of the kiosk.' Places are the product of socially constructed representations, which include various signs and symbols that send messages like language.

Symbols and signs of globalization, English: English signboards and apartment names

People are influenced consciously or unconsciously by encountering a wide variety of signboards in their daily lives. In addition, signboards reflect changes in people's perceptions and practices, as well as social, economic, and cultural changes. Local signboards reflecting the characteristics of the country and its place have become globalized, and their various symbolic, cultural, and material characteristics have become mixed.

S17 took a picture of the signboard of the Sung-seo Senior Sports Hall right next to her school. She captured globalization in the signboard's use of Korean instead of English. She recognized that due to the influence of globalization, there are many mixed English and Korean signboards, and they are more sophisticated. However, she criticized these mixed English and Korean signboards for their lack of consideration of the older adults who use the facility, stressing the use of Korean rather than excessive English. S7 also photographed an English signboard at a local coffee shop, recognizing globalization in that he was easily able to find English signboards all around. He noted the positive aspect of being able to access English through English signboards on local streets but raised the concern that it would make generations who were not familiar with English feel socially alienated and distant.

Moreover, in Korea, standardized residential landscapes of apartments built by large construction companies are easily found. To this point, S7 paid attention to the brand name of apartments among the local residential landscapes. He recognized globalization from the name of the construction company written in English on the walls of the apartment. He appreciated that the brand names of apartments written in English may give consumers a more sophisticated feel, but the excessive use of English entails the problem of diminishing the use of the Korean language.

Various languages of the kiosk

S2 captured globalization by recording the various language settings for foreigners in the kiosks of local coffee shops. He said this could be proof that there are many foreigners who use local coffee shops in Korea. For foreigners, this is a positive aspect in that communication is convenient and ordering is easy, but there are concerns that these various languages can cause difficulties for older adults in Korea who are not as skilled at using kiosks.

Environmental and Health Globalization

The final theme of the globalization of the local landscape is 'globalization of environmental and health,' and its subcategories are 'health promotion and advertising for foreigners' and 'environmental pollution,' which are also related to the spread of COVID-19 since 2020. Although globalization is a common term in economics and the social sciences, it is also closely connected to the practice and purpose of physical and environmental sciences, and there are aspects of globalized phenomena that are exemplified in physical geography. Globalization has also encouraged the setting of modern scientific agendas that focus on large-scale issues of environment, development, and environmental change (Clifford, 2009). Ecological globalization describes the idea of considering the earth as a global entity.

Health promotion and advertising for foreigners

Participant S15 took a photo of Korean medicinal herbs being advertised in Vietnamese at a local market.

Narrative: This photo was taken at a local public health center. It contains information on vaccinations for foreign children who are not registered with domestic public health centers. I chose this photo because I thought it was a real case that shows the spread of diseases caused by globalization and the efforts of local governments in response. As you can see from the photo, if not only many people, but also cultures and resources come and go to countries around the world, you can get what you can't get from each country. We can also learn new things and develop ours for the better. However, this globalization also spreads bad things, such as diseases, like the current situation. Conflicts and discrimination are also spread. Efforts should be made to strengthen entry and exit regulations and to recognize and understand each other to solve this problem (S11).

Figure 7. Vaccination policies for foreign neighbors (Source: Field study)

The area where the participants live is a place where there are many foreign workers, and many foreigners encounter globalization in the way they live as part of a foreign country. She expressed concern that although Korea's medicinal culture can spread to foreign countries and generate economic benefits, Korean culture can be misrepresented or transformed into those cultures. Therefore, she saw the need to take pride in Korean culture and exhibit and promote its excellence online and offline.

Various infectious diseases have spread around the world due to the influence of globalization, prompting major changes in all areas, including politics, economy, culture, health, and society. The most representative example is COVID-19, which has recently caused damage domestically and globally. Prior to globalization, infectious diseases spread smoothly and sequentially to the surrounding areas over a long period of time; however, the situation has changed as globalization has progressed. The COVID-19 pandemic dramatically demonstrated the risks that virus mutations can pose in a situation where it has become very easy to cross borders. In particular, large-scale human exchanges through aircraft have become an advantageous environment for virus movement.

S11 photographed a COVID-19 vaccination guide for unregistered foreign children at a local health center (**Figure 7**). This photo highlights the transmission of diseases caused by globalization and the efforts of local governments to stop such transmission. Specifically, it depicts a vaccination guide for diseases that have rapidly spread around the world due to globalization, and it also delineates the relevant policy for foreign neighbors. S11 pointed out the problem that globalization spreads dangers such as diseases as well as conflicts and discrimination. Accordingly, he asserted that when the world is in a crisis, such as an epidemic, it is necessary to strengthen immigration regulations and make efforts to recognize and understand each other.

Environmental pollution

Supporters of globalization believe that globalization can not only alleviate poverty in developing countries but also improve environmental problems by expanding and transferring environment-friendly technologies to developing countries. Critics, on the other hand, argue that globalization has led to a widening gap between the rich and the poor, created overproduction that enables transnational corporations to dominate the global market, and transferred polluting industry technology to developing countries, resulting in environmental destruction.

With this context in mind, participant S14 took a picture of acid rain falling on a local street. He captured globalization in this phenomenon of acid rain falling in the local area where he lives due to air pollutants from neighboring countries. He expressed concern about the damage caused by harmful substances utilized in neighboring countries where factories actively operate due to globalization. Therefore, he suggested strengthening factory-related regulations such as carbon credit as an alternative.

In addition, S14 captured globalization in the phenomenon that soda from multinational corporations, such as Coca-Cola and Pepsi, has become commonplace in our daily lives, noting empty cans of multinational beverage companies abandoned on local streets. The fantasy of Coca-Cola was expanded and reproduced worldwide after World War II, as the United States became the most powerful hegemonic country in the Western world. Coca-Cola, a representative drink that spread American consumption culture to the world, injected the American lifestyle into the unconscious mind of people around the world through advertisements. S14 noted the advantage of enjoying a variety of beverages due to globalization but criticized its negative aspects such as the garbage problem arising from the discarding of products of multinational corporations.

In addition, he suggested strengthening legal punishments for littering as an alternative, pointing out that the recent non-face-to-face consumption culture caused by COVID-19 has accelerated the garbage crisis.

DISCUSSION

Ultimately, the debate continues as to whether globalization has had an overall negative or positive impact. Many scholars have researched the impact of globalization on certain countries or regions (Faulconbridge & Beaverstock, 2009). However, few studies have adopted the photovoice methodology to examine the impact of globalization, particularly in the context of certain cities in Korea and from the perspective of students, who themselves represent multiple perspectives. Accordingly, this study reviews and attempts to verify the effectiveness of photovoice as an alternative methodology to enhance transnational Korean students' critical thinking and understanding of the impact of globalization on certain cities in Korea.

In particular, this photovoice project allowed the participants to explore complex human (cultural) and physical landscapes related to globalization by applying photovoice techniques to landscape interpretation in the local area where the students live. The class that employed this photovoice project had three components–theoretical introduction, fieldwork, and analysis of results and presentation–and the students were guided through the processes of reading landscape as text to recognize and analyze their unique urban environments and then critically recognize and practice the landscape of globalization. In practice, this photovoice project is a field-based exercise or learning activity that asks students to engage in three basic approaches: observation/recording, interpretation, and analysis of place-based landscape reading. By positioning photovoice as a scholarly product, we move students beyond the position of tourists or visitors in the local landscape where they live and instead encourage them to engage as scholarly participants–observants. Students' photovoices not only document the physical environment but also record their interpretation and reading of the location as a complex landscape. Using photovoice as a methodology for place-based fieldwork creates accessible ways to engage students in cultural geography, interpretive environmental studies, and grounded practices and methods of critical analysis (Bourque & Hamerlinck, 2021).

Overall, the photovoice project conducted in this study was intended for the participants, the students, to explore their own "change in places and landscapes according to globalization." But is place learning necessary in the era of globalization? While some are skeptical, this kind of education is still important. Given that globalization does not only mean standardization and overall unity but also highlights the diversity of each place or local globally, place learning is, rather, more meaningful in the era of globalization and localization as an educational method that can reveal the diversity of each region by utilizing one's own identity. After all, understanding the local is understanding the world, and understanding the world is understanding the local.

Globalization is not a new process; rather, it has been with us since the advent of capitalism. However, the rapid pace and all-consuming nature of globalization have become especially relevant in the 21st century. Moreover, although the effects of globalization are unevenly distributed across the globe, almost everyone is affected by it in some way. The resulting global interdependence of countries, economies, and cultures means that actions in one place often have effects in every part of the world. Therefore, as Owen (2010, p. 4) emphasized, "What is important to us as teachers is that our students understand their place in this globalized world."

The photovoice methodology, as this study's pedagogical tool, was very useful for this purpose, as it provided a set of strategies and contexts for students to meaningfully participate in the topic of globalization. In particular, the students applied this methodology to successfully document the landscape of globalization in the place where they live. By examining the different definitions of the term globalization, students were able to quickly identify various types of globalization, ranging from cultural to economic, environmental, political, educational, and environmental globalization; understand different people's perspectives; and learn that the different lenses people use to see globalization are shaped by individual contexts and experiences. Therefore, we anticipate that the students' own knowledge and understanding of globalization will form their views of what is possible as well as their preferred future (Owen, 2010).

Furthermore, participants considered the social and environmental consequences of the political, economic, social, cultural, and environmental processes of globalization for people living in different locations. In particular, participants investigated whether and how processes of globalization operate to create, maintain, and deepen inequality, poverty, and injustice amongst individuals, groups, regions, and nations. They also explored population growth and migratory shifts and considered the role that these demographic changes have in broader processes of globalization. They demonstrated a broad understanding of the key issues in globalization and critically engaged in debates on globalization.

In the photovoice project, the participants reviewed the photos they took. Although it is unlikely that the participants understand the 'true' story of the scenery in the picture, the interpretation of a picture is a process of making meaning. This process elicited a strong

emotional response from the students, as well as captured genuine interpretations of the forces of globalization. In their reflections, the participants remarked that being encouraged to not only take a photograph but also view it through a much different lens resonated with them on a much deeper level. In this regard, this photovoice project assignment facilitated what Warne et al. (2013) refer to as "genuine participation" in learning, where students develop personal meanings about a subject matter. Indeed, images "evoke deeper elements of human consciousness than do words" (Harper, 2002, p. 13); they also foster stronger attitudes, thus enhancing the affective domain of learning (Linz, 2011).

The photovoice assignment demands students to closely examine their social environment and find ways to connect classroom knowledge to real-life experiences in the form of representational images. To this extent, the learning is reflective, experiential, and active. This level of attentiveness in completing the photovoice exercise often engenders what social scientists call "making the familiar strange"–a form of deep reflection (Bridger, 2013 refers to this as the "familiar becomes strange"). Importantly, the photovoice exercise nurtures critical consciousness about social issues that exist within the environment in which students live (Peabody, 2013). This is achieved by encouraging students to revisit everyday places that would have remained obscure or unnoticed if they had not participated in the assignment.

Pictures are visual data coded with a wealth of information. Photovoice exercises (projects) engage students in the practice of visual reading, writing, and thinking, allowing them to code messages about social issues and deliver them through photos they took. At the end of the course, students knew how to assimilate academic concepts (here, globalization) into their everyday experiences and were able to represent and interpret (meta-represent) social issues (here, the impact of globalization) using their photos (Azevedo, 2000; diSessa, 2004; diSessa & Sherin, 2000; diSessa et al., 1991; Kozma & Russell, 2007; Lee, 2011).

When students encounter the subject of globalization for the first time, they may see it as dry and boring rather than directly related to their lives. However, they began to see as they explored matters that involve them that not only are their lives directly affected by globalization, but they can also play a role in shaping its future impact. As this photovoice project focused on how students' lives are affected by globalization, they described their prior understanding of global issues as well as the connection between globalization and their lives. Moreover, the students had the opportunity to learn and reflect on their place in the globalized world.

As can be seen, photovoice projects based on globalization topics can inspire students to develop into effective and independent learners. To this point, this study argues that the ability to describe, explain, analyze, evaluate, and synthesize landscapes is central to a sound understanding of geography and that the study of landscape is essential for students to develop a clear understanding of geography as a discipline. In this study, the themes generated from the results reflect students' personal geographies, and this photovoice project, which enriches these personal geographies, has contributed to improving students' representation and meta-representation skills (Azevedo, 2000; diSessa, 2004; diSessa & Sherin, 2000; diSessa et al., 1991; Kozma & Russell, 2007; Lee, 2011). In other words, this project has helped the students develop "ways of seeing" to help them comprehend the world as a whole by seeing it. As such, geography can occupy a central position within the school curriculum in that it provides students with the ability to describe, explain, and analyze the complex, dynamic, and ever-changing environments and landscapes in which we live (Rawding, 2007).

After completing the photovoice project, most of the participants reported that photovoice was a new, interesting, and effective methodology for competency development. Although at first, the students were unfamiliar with the photovoice activity itself and questioned how globalization could be captured through photography and narrative, they later reported that the abstract concept of globalization could be embodied through photovoice activities and easily captured locally. Correspondingly, the students remarked that photovoice is valuable because it allows them to better understand their surroundings (see S12's reflection journal).

> At first, I thought, "Is this really related to globalization?" while taking the photo. However, I was convinced that it was never difficult to find the landscape of globalization around us in the process of analyzing and discussing photos with the group members. At first, globalization was such an abstract concept that I couldn't easily touch it, but I found that it could be easily captured by people around me while doing this photovoice activity. And I was able to critically consider the problem of globalization by applying my voice to this photo and presenting the impact of globalization. Through this photovoice activity, I was proud to be able to recognize that 'Oh, there is a landscape of globalization here, too' even when I was walking on the street. At the end of this photovoice activity, I feel like I have the ability to look at the world more broadly and critically (part of S12's reflection journal).

This photovoice project led to the students' active participation: they analyzed the images they generated through experience, participation, and observation, not through teacher-lead one-sided information delivery, and they recorded and analyzed the impact of

globalization from various perspectives. These photovoice activities were effective in improving students' social studies (including geography) curriculum competencies according to Korea's 2015 revised curriculum–namely, critical thinking and creativity, problem-solving and decision-making, self-respect and interpersonal relationships, community, and integrated thinking. In addition, by observing, analyzing, and interpreting the landscape through photovoice activities, the students improved their visual literacy. In particular, they developed their ability to discern the meanings behind photos and strengthened their critical reflections on the impact of globalization on the local space where they live. Moreover, by understanding this impact and their responses to it, the students cultivated and enhanced their critical thinking and problem-solving skills. Through group activities, students practiced respecting the opinions of others and developed community skills by jointly performing tasks. Lastly, through presentations within and between groups, they developed the thinking skill of viewing globalization in an integrated manner (see S5's reflection journal below).

> Through the photovoice project, I could see that globalization has a greater impact on my life than I thought. I had an eye for the landscape of globalization that I had inadvertently passed, and I was able to understand the impact of globalization on the local region, and it was an opportunity to think about what kind of efforts I should make to resolve any negative effects. Through this activity, I think I have developed the ability to look critically and integrally at society. I also thought that my critical thinking skills that I grew up through this activity would have a positive effect in many aspects of my life. I also learned how to accept various opinions through discussions with my friends (part of S5's reflection journal).

On the other hand, while introducing the photovoice project, the biggest issue was safety-related because students performed independent activities outside the classroom without teacher guidance while implementing the project. Therefore, it cannot be overemphasized on safety issues in the implementation of the photovoice project.

CONCLUSIONS

When used as a pedagogical tool, the photovoice methodology provides an opportunity for participant students to actively intervene in their local environment through their photos and narratives about them. Furthermore, this study suggests that photovoice can help students understand globalization through concrete practical exploration of their real living space rather than abstract or theoretical perspectives. In other words, through photovoice activities, students were able to develop competence to represent and meta-represent the impact of globalization on their lives and communities. We also found that students cultivated critical thinking and problem-solving skills regarding the impact of globalization and related problems by taking pictures and writing narratives based on their vivid experiences.

Students directly or indirectly encounter a great deal of visual information and, therefore, must have the competence to interpret it. However, visual literacy education in schools has so far only focused on the aspect of interpreting visual materials made by others. As a result, some students fail to properly grasp the true meaning of visual materials and, further, fail to apply them to their lives and communities corresponding to their level of experience. However, this study proves that the use of photovoice can improve both the ability to generate visual data (representation competence) and the ability to interpret it (meta-representation competence). In other words, visual literacy education using photovoice can improve students' meta-representation competence through activities to describe meaning about them as well as students' competence to represent visual materials related to a specific topic.

This study's limitations and matters that should be added or studied in future studies are as follows. First, in-depth research is needed to confirm the meta-representation competence. Through photovoice activities, students were able to develop representation and meta-representation competencies together in the process of generating landscape photos of globalization, interpreting them as narratives, and discussing the results with each other.

However, we did not properly confirm how this meta-representation competence developed in detail. Therefore, future investigations should examine how students' meta-representation competence changes after photovoice activities by referring to previous studies that have classified the stages of meta-representation competence.

The items to be studied further in the future in relation to this study are as follows. Research is needed to confirm students' meta-representation ability. Students were able to develop meta-representation skills in the process of generating landscape photos, interpreting them as narratives, and discussing the results with each other through photovoice activities.

However, it was not properly confirmed how the students' meta-representation ability developed. Therefore, a study on how students' meta-representation ability changed after photovoice activities should be conducted by referring to previous studies that divided the stages of meta-representation ability.

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