How Can We Prepare Learners to Realize an Equitable Society?: From the Perspective of the Sustainable Development Goals (SDGs) and Education for Sustainable Development (ESD)

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The purpose of this paper is to explore ways to cultivate learners who can take part in inquiry, discussion, and action toward realizing an equitable society from the perspective of the SDGs and ESD. After confirming the importance of dealing with the concept of and the issues around equity with consideration of the mutual interdependence among all 17 SDGs, the paper notes that the "inclusive and equitable quality education" mentioned in SDG 4 is assumed to be achieved by the integrated improvement and organization of a variety of aspects, such as educational environment, policy, systems, budget, teachers, and competency development. Next, based on the importance of competency development of all learners through ESD, the paper demonstrates the potentials of objective-referenced assessment for ESD. Finally, the paper proposes a tentative idea on a set of objectives for lessons on equity from the perspective of ESD, as a useful way to develop school-based curricula of quality ESD at each school and to promote effective lessons on equity to prepare learners who can attain the necessary competencies and take part in inquiry, discussion, and action toward realizing an equitable society.

Keywords: Education for Sustainable Development (ESD), Sustainable Development Goals (SDGs), equity, objective-referenced assessment, competency development

1. Introduction

The relationship between education and equity has been discussed in various aspects. Nishimura and Sasaoka (2016), for example, address the ideas on equality and equity of education proposed by various international organizations and actors and analyze how each actor defines and views equality and equity of education. Kitamura et al. (2014) also analyze qual-

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ity and equity in education for a sustainable society.

Based on the findings and ideas of these studies, it can be suggested that equity can be defined based on standards or perspectives of some kind before being applied to any educational policy or practices. In addition, the definition of equity may differ depending on the situation, and can be determined by the people who have the power or opportunity to express their thoughts. It should also be noted that people who cannot take part in the process of deciding what equity or equitable society is have trouble making their voices heard or embedded in policies or activities.

Who can decide what equity is? How can we determine the target population of equity? What are effective strategies for realizing an equitable society? There is no "correct" or "absolute" answer for these questions. Therefore, it is an important issue in education to prepare all learners to effectively and actively take part in the process of deciding what an equitable society is and how it can be realized.

Based on this perception, the purpose of this paper is to explore ways to cultivate learners who can take part in inquiry, discussion, and action toward realizing an equitable society. For this purpose, this study focuses on the discussion of the Sustainable Development Goals (SDGs) and Education for Sustainable Development (ESD). This is because the SDGs aim at an equitable society and ESD has been regarded as an essential factor for achieving the SDGs, as described below.

Partly because ESD has been promoted by UNESCO, various practices by various people or organizations in various fields have been implemented. Since it is impossible to cover practices all over the world, this study mainly focuses on the situation and the practices of ESD implemented at schools in Japan.

2. Equity in "Sustainable Development" and the Relationship between Equity and the SDGs

The concept of "sustainable development" is the basis of both the SDGs and ESD, as is clear from their names. In addition, important concepts of equity were proposed when the concept of sustainable development was introduced to global society.

This concept became well-known around the world in 1987. In 1987, the World Commission on Environment and Development (WCED) released a report entitled "Our Common Future" (the "Brundtland Report"), which defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED 1987, p. 43).

The report went on to say that "[e]ven the narrow notion of physical sustainability implies a concern for social equity between generations, a concern that must logically be extended to equity within each generation" (ibid.). Thus, the report proposed, in particular, two important concepts of equity: "inter-generational equity" and "intra-generational equity." The former involves a close relationship between equity and the conservation and use of the environment and natural resources. Issues such as resource depletion, environment disruption, or climate change are as typical examples. Elsewhere, the latter involves the close relationship between equity and reducing disparities in the same generation. Typical examples of disparities are the North-South issue and issues around development such as economic disparities or

access to education. Considering these concepts of equity, it is apparent that equity in sustainable development is closely related to various global issues such as poverty, economic gaps, inequality, protection of the natural environment, and climate change.

These global issues are, needless to say, indicated in the SDGs, which consist of 17 goals and 169 targets. The 17 goals are "No Poverty (Goal 1)", "Zero Hunger (Goal 2)", "Good Health and Well-Being (Goal 3)", "Quality Education (Goal 4)", "Gender Equality (Goal 5)", "Clean Water and Sanitation (Goal 6)", "Affordable and Clean Energy (Goal 7)", "Decent Work and Economic Growth (Goal 8)", "Industry, Innovation, and Infrastructure (Goal 9)", "Reduced Inequalities (Goal 10)", "Sustainable Cities and Communities (Goal 11)", "Responsible Consumption and Production (Goal 12)", "Climate Action (Goal 13)", "Life Below Water (Goal 14)", "Life on Land (Goal 15)", "Peace, Justice and Strong Institutions (Goal 16)", and "Partnerships (Goal 17)" (United Nations n.d.).

In addition, all the goals are related closely to one another, as noted: "The interlinkages and integrated nature of the Sustainable Development Goals are of crucial importance in ensuring that the purpose of the new Agenda is realized" (UN General Assembly Resolution 70/1, 2015, p. 2). Therefore, it is inevitably important to deal with the concept of and the issues around equity with consideration of the mutual interdependence among all 17 SDGs. This should also be kept in mind when dealing with equity from the perspective of ESD.

3. The Role of ESD in the SDGs and Key Points to Achieve SDG 4

The SDGs were released by UNESCO in 2015 as a blueprint to achieve a better and more sustainable future for all (United Nations n.d.). Goal 4 addresses education. UN General Assembly Resolution 72/222 (2017) noted ESD as "an integral element of the Sustainable Development Goal on quality education and a key enabler of all the other Sustainable Development Goals" (p. 3). Thus, ESD is mentioned in one of the targets in Goal 4 (target 4.7) and is also regarded as a key for accomplishing all 17 goals. ESD plays an essential role in achieving the SDGs and building a more just[1] and sustainable society[2].

Goal 4 aims to "[e]nsure inclusive and equitable quality education and promote lifelong learning opportunities for all" (UN General Assembly Resolution 70/1, 2015, p. 14). To understand the meaning of "inclusive and equitable quality education" in detail, it is helpful to look closely at the targets of Goal 4 (ibid. p. 17).

First of all, it can be confirmed that "for all" means "for all people without regard to age, gender or status." For example, there are expressions such as "all girls and boys" (targets 4.1, 4.2), "for all women and men" (target 4.3), "eliminate gender disparities" and "for the vulnerable" (target 4.5).

Second, there is a focus on access to all educational stages at all ages. In addition to the expression "complete free, equitable and quality primary and secondary education" (target 4.1), there are also expressions such as access to "quality early childhood development, care and pre-primary education" (target 4.2), "affordable and quality technical, vocational and tertiary education, including university" (target 4.3), and "all levels of education and vocational training" (target 4.5).

Third, competency development of learners is regarded as one of the important aspects, based on descriptions such as "leading to relevant and effective learning outcomes" (target

4.1), "relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship" (target 4.4), "achieve literacy and numeracy" (target 4.6) and "the knowledge and skills needed to promote sustainable development" (target 4.7).

Fourth, there is a focus on promoting improvement of educational environments and policies. Examples of specific approaches include "[b]uild and upgrade education facilities" and "provide safe, non-violent, inclusive and effective learning environments for all" (target 4.a), "substantially expand globally the number of scholarships" (target 4.b), and "substantially increase the supply of qualified teachers" (target 4.c).

Confirmation of these features indicates that the "inclusive and equitable quality education" mentioned in SDG 4 is assumed to be achieved by the integrated improvement and organization of a variety of aspects, such as educational environment, policy, systems, budget, teachers, and competency development.

4. Equity to Be Critically Examined in ESD and the Importance of Competency Development

The report "Education for Sustainable Development: A Roadmap" (Roadmap), released by UNESCO in 2020, "sets out the urgent challenges facing the planet and explores the next step UNESCO is taking in responding to them through education with detail on new emphases and actions" (UNESCO 2020, p. 3), proposing three main points for achieving the 17 goals as below (ibid. p. 16):

- ESD raises the awareness of the 17 goals in education settings:
  ESD enhances the understanding of learners and the general public on what the SDGs are and how these goals connect with individual and collective lives.
- ESD promotes critical and contextualized understanding of the SDGs:
  Sustainable development often requires a balancing act among diverse views and priorities. ESD raises questions on the inter-linkages and tensions between different SDGs and provides learners with the opportunity to navigate the required balancing acts with its holistic and transformational approaches.
- ESD mobilizes action towards the achievement of the SDGs:
  ESD efforts address sustainable development issues, more specifically the SDGs. These efforts continue to mobilize action for sustainable development in education settings, in particular in communities, through whole-institution approaches to ESD.

As shown in the second point, the SDGs themselves are characterized as goals which can be critically examined (Nagata 2020). Therefore, it is appropriate for learners and teachers to think of equity not as an immutable or given concept, but rather as a concept each learner and teacher together examine and seek. It is thus an important issue for education not to "teach" equity as the status quo, but to critique the concept of equity to be "re-developed" or "re-constructed" and to seek ways to realize an equitable society together.

Based on this perception, competency development through ESD should be integral, as various materials also note. According to the Roadmap, "ESD empowers learners with knowledge, skills, values and attitudes to take informed decisions and make responsible ac-

tions for environmental integrity, economic viability and a just society empowering people of all genders, for present and future generations, while respecting cultural diversity" (UNESCO 2020, p. 8). Thus, ensuring learners to obtain knowledge, skills, values and attitudes is essential for implementing ESD. In addition, the competency development of all learners should be pursued, particularly in terms of the guarantee of human rights and the empowerment of all learners to lead a life where they can fulfill their own potential and become lifelong learners who can take part in inquiry, discussion, and action toward realizing an equitable society.

Table 1: Learning dimensions and their aims shown in the Roadmap

Learning dimension	Aims
Cognitive	Understand sustainability challenges and their complex interlinkages, ex[p]lore disruptive ideas and alternative solutions
Social and emotional	Build core values and attitudes for sustainability, cultivate empathy and compassion for other people and the planet, and motivate to lead the change
Behavioral	Take practical action for sustainable transformations in the personal, societal and political spheres

(Based on UNESCO 2020, p. 17)

The Roadmap also mentions that "Education for Sustainable Development aims to raise knowledge, awareness and action" (ibid. p. 17) and indicates three learning dimensions (ibid.): cognitive, social and emotional, and behavioral. Table 1 shows the aims of each dimension.

The correlations between these three learning dimensions and knowledge, skills, values and attitudes are not apparent. Regarding the aims shown in Table 1, however, it can be said that knowledge mainly relates to the cognitive learning dimension and values and attitudes can mainly be regarded as relating to the social/emotional and behavioral learning dimensions. Since ESD's apparent aim is to require learners to take action toward a sustainable society, it is difficult, or almost impossible, to clearly distinguish values from attitudes. In addition, skills for inquiry and problem-solving (posing questions, collecting data or information, analyzing data or information critically, and exploring disruptive ideas and alternative solutions) and for working collaboratively with others seem to be embedded or required through the whole learning process, since ESD requires learners to work on tasks toward realizing a sustainable society with others.

5. The Position of ESD in School Curricula in Japan and Points to Note for Implementation

Given the above, how can teachers or practitioners have all learners attain necessary competencies through education? The following section explores this question, focusing mainly on recent situations and discussions regarding ESD at schools in Japan.

According to the Japanese National Commission for UNESCO (n.d.), ESD is described as below.

ESD is an abbreviation for Education for Sustainable Development.

Today, the world is facing a variety of problems caused by human development activities such as climate change, biodiversity losses, resource depletion and the expansion of poverty. ESD comprises learning and educational activities that aim to develop alternative values and transformative actions that lead to problem-solving and to realize a sustainable society by taking the initiative to accept these problems of modern society as our own and tackling the problems in our immediate environment (think globally, act locally) in order to ensure that human beings are able to secure an abundant life for future generations.

In short, ESD is education that fosters the builders of a sustainable society.

Furthermore, according to the "Preamble"[3] of Japan's National Curriculum Standards (Courses of Study) revised in 2017 and 2018, "[s]chools, henceforth, are required to aim to achieve these objectives and goals of education as well as enable each pupil to recognize their own good points and possibilities, respect all others as valued members of society, overcome various social changes while cooperating with diverse people, establish to a fulfilling life, and be a builder of a sustainable society" (Ministry of Education, Culture, Sports, Science and Technology [MEXT] n.d.). This description indicates that ESD should be embedded and implemented through the whole of the school curriculum for students at all ages.

The school curriculum in Japan, however, normally consists of "subjects" (for all schools), "Morality Period (a special subject for moral education)" (for elementary and lower secondary (junior high) schools), "Foreign Language Activities" (for elementary schools), the "Period for Integrated Studies" (for all schools)[4], and "Special Activities" (for all schools). As these components (learning areas) show, there is no subject or area which is dedicated to ESD in the school curriculum.

In this context, ESD in Japanese schools has been implemented mainly in the Period for Integrated Studies (Ohagi 2019, Ichinose 2019). The overall objectives of the Period for Integrated Studies are described thus in the National Curriculum Standards revised in 2017 (MEXT 2018, p. 179):

To develop pupils' competencies for solving problems better and thinking in their own way about life as outlined below through using approaches of inquiry and cross-synthetic studies.
(1) acquire knowledge and skills necessary for problem solving, form concepts related to problems and understand the effectiveness of inquiry studies through the process of inquiry studies.
(2) develop abilities to generate questions in real world or real life, find their own tasks, collect information, organize and analyze information, and summarize and express their findings.
(3) commit to inquiry studies in a proactive and collaborative manners, and foster an attitude of taking part in society actively while taking advantage of each other's strength.

The Period for Integrated Studies requires students to deepen learning through cross-synthetic studies, inquiry, and collaborative problem-solving. Because of the high affinity between the objectives of the Period for Integrated Studies and ESD, it is, in a sense, natural

that ESD has tended to be implemented mainly in the Period for Integrated Studies.

However, the philosophy and key features of ESD as summarized above have not necessarily been embedded in the Period for Integrated Studies. For example, inquiry-based learning does not necessarily lead to exploring and developing disruptive ideas, alternative solutions or values, or to taking transformative action to realize a sustainable society. In addition, as shown in the fact that ESD requires a whole-school approach or whole-institution approach for its effective implementation, ESD is holistic from its original concept (Nagata 2017, Nagata 2020). Therefore, a point of critical importance is how to embed the philosophy and key features of ESD into the entire school curriculum and how to integrate and connect all learning areas effectively in order to foster the builders of a sustainable society.

Considering these conditions, it can be helpful to clarify the objectives to be achieved and to make sure learners obtain the necessary knowledge, skills, values and attitudes. Clarifying the objectives to be achieved by learners makes it possible for teachers to understand and share the concrete image of the learners they intend to cultivate and also makes it easier to develop school curricula which integrate and connect all learning areas effectively, enabling the learners to achieve these objectives. In addition, implementing and improving instruction and learning based on assessments along with the objectives is essential for the competency development of each learner.

6. Objective-referenced Assessment in Japan's School System and Its Application to ESD Practice

To ensure all learners obtain the competencies needed and to realize constant improvement of practices, "objective-referenced assessment" has been officially practiced in Japan's school system for more than 20 years.

Objective-referenced assessment is a type of assessment that shows how well the objectives have been achieved by the student (National Institute for Educational Policy Research n.d., p. 139). It was adopted throughout Japan in 2001, distinct from the rising attention to ESD. Therefore, all teachers in Japan should be familiar with this assessment and have experience of its practice.

Nishioka (2017) points out that "[o]bjective-referenced assessment is greatly significant because it promotes the clarification of objectives, assessment criteria and standards before teaching starts, and it enables improvements to be made to instruction based on assessments made according to the objectives" (p. 128). Since objective-referenced assessment requires clarifying objectives, assessing in detail each student's learning achievements and issues, and revealing teaching achievements and problems, it can lead to quality education which helps students achieve objectives.

Developing a rubric as criteria according to the objectives can also help teachers determine how to support students. In addition, these objectives and rubrics can help teachers develop and improve their practice, and can also help students realize what they can and cannot do by themselves and with others. This should lead to understanding of how to improve their own learning to obtain the necessary competencies.

Based on these perceptions, Kimura (2022) points out the importance and potential of applying objective-referenced assessment to ESD practice. Based on mainly Australian re-

search on global education and development education (Kimura 2014), Kimura proposes aligning the objectives of ESD to three perspectives and suggests a tentative general rubric and lesson plans based thereon. The three perspectives are "social recognition", "self-recognition," and "participation in action."

"Social recognition" means recognition of the actual condition of, and causes for, global issues, interdependence or interlinkages between global issues, ideologies and powers which affect the formation of social structures that create global issues and conflict of interest. "Self-recognition" means recognition of the interdependence or interlinkages between the self and global issues, individual abilities or competencies for problem-solving, and the impact of ideologies or powers on one's own and others' perceptions and values. Finally, "participation in action" refers to the process of examining and actually taking action by tangible means to solve various problems in order to create a better society through this action, based on the deepening of "social recognition" and "self-recognition" and much consideration (Kimura 2022, pp. 28-29).

7. Importance of Assessment or Evaluation and Potentials of Objective-referenced Assessment for ESD

Various documents have also discussed the importance of assessment or evaluation in the field of ESD and the SDGs, mainly because assessment or evaluation has been regarded as an important factor to monitor the progress of ESD, to discern its effectiveness, and to collect data toward improving the ensuing efforts. The Roadmap, for example, suggests six key indicators as shown in Table 2 to monitor the progress of *ESD for 2030* and "Monitoring and Evaluation Framework of *ESD for 2030*" (UNESCO 2020, pp. 49-51).

Table 2: Six key indicators to monitor the progress of *ESD for 2030*

Policy	Extent to which legal frameworks and policies are in place to promote ESD.
Learning environment	Extent to which learning environment promotes ESD and its whole-institution approach.
Educators	Extent to which educators are trained to be able to teach ESD and apply whole-institution approaches to ESD in learning situations.
Youth	Extent to which youth are engaged in ESD.
Community	Extent to which ESD is promoted in local communities.
Progress of country initiatives	Extent to which *ESD for 2030* is implemented in countries around the world.

(Based on UNESCO 2020, p. 49)

De Leo (2012) analyzes key international standard-setting documents, reports, and relevant scholarly research and suggests a comprehensive and coherent framework of evaluative criteria for ESD (p. xii). Yonehara (2021), through a theoretical analysis and action research, regards the necessity of perceptional change from seeking "measurability" to considering "evaluability" as the biggest feature of SDG evaluation, and further points out the importance of theory evaluation, participation and collaboration, and shared perspectives among parties concerned in order to regard evaluation as part of school management.

The Asia/Pacific Cultural Centre for UNESCO (ACCU) initiated the HOPE (Holistic,

Participatory and Empowering) evaluation framework in 2008, mainly based on publications by UNESCO and the global monitoring and evaluation approach developed under the auspices of the International Union for Conservation of Nature (IUCN) (Guevara 2009, pp.138-140). Nagata and Hohtsuki (2011) focus on this HOPE evaluation method, which was invented along with criticism of "evaluation in which the evaluator and the evaluated face each other, with evaluation taking place based on indicators brought in by the evaluator" (p. 6), and examine its outcomes and challenges through an international study conducted in Asia-Pacific countries. The study revealed that ESD contributed to increased level of hope, acquisition of higher-order thinking skills, feelings of empowerment, and a "caring" attitude.

As mentioned above, SDG 4 can be achieved by the integrated improvement and organization of a variety of aspects, such as educational environment, policy, systems, budget, teachers, and competency development. Therefore, curriculum assessment, school assessment, monitoring policy or country initiatives should be integral; the comprehensive evaluation frameworks presented by previous research mentioned above seem useful.

Previous studies, however, have not necessarily suggested how to assess in detail each student's learning achievements and issues objectively. When recalling that SDG 4 requires all learners to acquire the knowledge and skills needed to promote sustainable development, this point should be an important issue, in which objective-referenced assessment may, as discussed above, play an important role.

Incidentally, objective-referenced assessment can be regarded as an "evaluation in which the evaluator and the evaluated face each other, with evaluation taking place based on indicators brought in by the evaluator" (Nagata and Hohtsuki 2011, p. 6), which is criticized by the HOPE evaluation method. To make the most of the potential of objective-referenced assessment while responding to the criticism presented by the HOPE evaluation method, one effective method is for various stakeholders such as learners and practitioners to collaboratively develop learning objectives and evaluate their learning outcomes through careful discussion. To this end, a tentative idea on a set of objectives, as a springboard for discussion, is presented in the next section.

Since ESD should be implemented through whole-school or whole-institution approaches, the targets, such as policy, school management, effectiveness of curriculum, educators, and communities, are integral to monitoring the progress of ESD and to improving ensuing efforts. In addition, it is also essential to make sure all learners acquire, at least, a minimum set of competencies. Therefore, it is important to deliberate what kinds of assessment are suitable for each target and how they work better in combination.

8. A Tentative Idea on a Set of Objectives for Lessons on Equity from the Perspective of ESD

Based on the ideas in Kimura (2022) and the key points of ESD confirmed in previous sections, a tentative idea on a set of objectives for lessons on equity can be developed as Table 3. As shown in Table 3, a set of objectives is divided into three perspectives: "knowledge," "skills," and "values and attitudes."

"Knowledge," related closely to the cognitive learning dimension shown in Table 1, consists of the two dimensions of "social recognition" and "self-recognition," based on the study

Table 3: A tentative idea on a set of objectives for lessons on equity

Perspectives		Objectives
Knowledge	Social recognition	• Understand 　- what the SDGs are 　- how equity has been defined or discussed 　- approaches toward an equitable society and sustainability 　- actual conditions of and causes for issues with equity and other global issues 　- interdependence or interlinkages among equity and other global issues 　- ideologies and powers with impact on forming social structures that create issues with equity and other global issues and conflict of interest
	Self-recognition	• Understand 　- interdependence or interlinkages among the self/selves and issues with equity 　- individual abilities or competencies toward problem-solving 　- impact of ideologies or powers on one's and others' perceptions and values
Skills		• Inquiry and problem-solving (posing questions, collecting data or information, analyzing data or information critically, and exploring disruptive ideas and alternative solutions) • Work collaboratively with others
Values and attitudes	Participation in action for transformation — Personal	• Build core values and attitudes for an equitable and sustainable society • Cultivate empathy and compassion for other people and the planet • Motivate to lead the change • Action 　- to share each learner's own ideas and findings found or posed through inquiry learning 　- in everyday life towards the realization of an equitable and sustainable society
	Participation in action for transformation — Societal and political	• Action 　- to discuss widely in society what an equitable and sustainable society is and how we can realize it 　- to improve or rebuild social and political structures creating issues with equity and other global issues, conflicts of interest and so on

(Created by the author)

by Kimura (2022), to clarify the two different types of knowledge: knowledge about issues in society and knowledge about oneself. Though this set of objectives is for lessons on equity, equity inevitably has a close relationship with the SDGs, as mentioned above. This perception is reflected particularly in the "social recognition" dimension.

　　"Skills" is a perspective which Kimura (2022)'s research did not address. To be able to address issues with equity which have no "correct" or "absolute" answers, adopt the concept that equity should be "re-developed" or "re-constructed", and seek a way to realize an equitable society, it is vital to have learning environments which ensure that learners take part in inquiry, discussion and action toward realizing an equitable society. Therefore, skills for inquiry and problem-solving and working collaboratively with others are essential. They should be embedded and required through the whole learning process.

　　"Values and attitudes" seem to be indivisible and to be related particularly to the social/ emotional and behavioral learning dimensions shown in Table 1. This perspective corresponds to the "participation in action" perspective mentioned in Kimura (2022)'s research. Given the aims of the behavioral learning dimension, described as "take practical action for sustainable transformations in the personal, societal and political spheres," "personal" and "societal and political" dimensions should be set.

　　The set of objectives shown in Table 3 is intended to be used as a springboard for discussion for developing lesson plans or curricula for all ages and for all learning areas. This means that the objectives should be modified to be suitable for the intended learners and the

intended learning areas in each school. Furthermore, since this idea on a set of objectives is absolutely "tentative", there may be no "correct" or "absolute" answers for best practices on equity. Therefore, the author hopes to see future research on theory and practice of ESD to examine critically the tentative idea's appropriateness, effectiveness or usability to be improved or contextualized. This can be a useful way to develop school-based curricula of quality ESD at each school and to promote effective lessons on equity to prepare learners who can attain the necessary competencies and take part in inquiry, discussion, and action toward realizing an equitable society.

9. Conclusion

This paper explores ways to cultivate learners who can take part in inquiry, discussion, and action toward realizing an equitable society, through the SDGs and ESD. First of all, the importance of dealing with the concept of and the issues around equity with consideration of the mutual interdependence among all 17 SDGs was confirmed through looking at the concepts of "inter-generational equity" and "intra-generational equity." Next, it was pointed out that the "inclusive and equitable quality education" mentioned in SDG 4 is assumed to be achieved by the integrated improvement and organization of a variety of aspects, such as educational environment, policy, systems, budget, teachers, and competency development. The paper then noted that from the perspective of ESD an important issue for education is not to "teach" equity as the status quo, but to critique the concept of equity to be "re-developed" or "re-constructed" and to seek ways to realize an equitable society together. For this purpose, competency development of all learners is integral. The paper added that a comprehensive approach for assessment is essential and that objective-referenced assessment can play an important role. Finally, it proposed a tentative idea on a set of objectives for lessons on equity from the perspective of ESD. This set of objectives can be a useful way to develop school-based curricula of quality ESD at each school and to promote effective lessons on equity to prepare learners who can attain the necessary competencies and take part in inquiry, discussion, and action toward realizing an equitable society.

The paper has not proposed whole lesson plans or assessment criteria. The effectiveness of the idea also cannot be proved. The author hopes to address future research mainly through lesson study and action research with teachers.

Notes

1　Various papers use the Japanese word *kōsei* as a translation for both "equity" and "just." Thus, it is sometimes difficult to distinguish the term "equity" from other terms, particularly in the context of Japan's education systems.

2　Along with ESD, Global Citizenship Education (GCE) is mentioned in target 4.7. UNESCO (2017) explained that global citizenship "can be seen as an ethos or a metaphor rather than a formal membership" and "can, and is expected to, generate actions and engagement among, and for, its members through civic actions to promote a better world and future" (p. 2). Thus, GCE has a similar orientation to ESD.

3　The "Preamble" aims to clarify the philosophy of the revisions and share it widely within society. For the first time, this Preamble was added to the latest edition of the National Curriculum Standards, revised in 2017 and 2018.

4   Strictly speaking, the "Period for Integrated Studies" is the name of a learning area for elementary and lower secondary (junior high) schools. In upper secondary (senior high) schools, it is called the "Period for Inquiry-Based Cross-Disciplinary Study," with partially different aims as well.

Acknowledgment

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