EDUCATION FOR SUSTAINABLE DEVELOPMENT AS QUALITY EDUCATION: PRACTICE STRUCTURE FOR A WHOLE LEARNING APPROACH

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ABSTRACT

Education has an important role to play in transitioning our society towards a more sustainable future. Education for Sustainable Development (ESD) first emerged at the 1992 Earth Summit and is understood to be the essence of a number of "adjectival educations", most prominently environmental education. In Japan, environmental education has been practiced and promoted mainly by citizens, NPOs, and NGOs, reaching little penetration into school education. The socially critical nature of adjectival educations has resulted in its isolation from the mainstream and because the theories of teaching, learning, and curriculum for these educations do not cohere with those of the majority of teachers, only the few who share a similar understanding for education have practiced it. Fully integrating itself in a way that inspires re-orientation of the whole of education has not been successful.

In its most recent report on the UN Decade of ESD, UNESCO describes that "ESD is increasingly perceived as a catalyst for innovation in education" and that a relationship between ESD and quality education is emerging. This is a fundamentally different approach from regarding education as a means to building a more sustainable future ("instrumental mentality") to understanding how the practice of ESD could contribute to the goals of education.

Within Japanese school education, there has been an increased need to make learning more integrated and holistic. "New skills" such as "Zest for Living ("Ikiru Chikara"), which MEXT deemed the goal of education, emphasize educating the "whole person". Teaching of

complex social, economic, and environmental problems meant that interdisciplinary learning, which brings together unique perspectives of each discipline to produce deep understandings, was important. “Relevance”, particularly “social relevance”, looks beyond the classroom and is concerned with how learning in school connects to people’s daily lives, careers, and participation in society. Reduction in curricular content to reduce burden on students caused “fragmentation” and loss of structure in knowledge and reversing this trend is imperative. To summarize, learning must become “whole”. In 2002, the Period of Integrative Studies was established to meet these demands. However, due to its inherent difficulty of practice, most teachers think that time spent on its practice should be reduced or completely removed from the curriculum. To address both the issues for ESD and school education in a way that allows ESD to contribute to education, the aim of this research was to suggest that learning can be made “whole” through ESD and clarify the characteristics of practices structures essential for a “whole learning approach” through ESD.

The study was based on observation, interview to teachers, and document review of four exemplary practices of a whole learning approach through ESD. “ESD Good Practice” documents and “forms of integration” from interdisciplinary learning literature (i.e., artistic synthesis, personal resonance, contextualization, and complex explanation) served as reference for selection. Varying in scope, school type, and length of practice, cases selected were: Period of Integrative Studies at Otemachi Elementary School in Niigata, art education at the Tokyo Gakugei University International Secondary School, geography education at Kaishin Daiichi Junior High School in Tokyo, and a cross-curricular unit at the Shiraki High School in Hiroshima. Transcribed interview text, observation notes, and documents were analyzed based on theories from literature and recurring themes were categorized.

Important characteristics of practice structures for a whole learning approach through ESD were organized into eight groups: origin of teacher interest, involving other faculty,

expanding teacher capacity, finding and evaluating potential topics, aligning interests, forms of integration, tools and design principles that enhance integration, and assessing student learning. To highlight several research findings, subjects had devised ways to deal with resistance towards new practices and increase teacher capacity. Some of these strategies were: simplifying preparations and building on existing practice, turning the practice into something the teachers could take pride in, focusing on the by-products such as stimulation of teacher collaboration, and closing the physical distance between teachers. As not all topics are suitable for a whole learning approach, subjects evaluated potential topics against four criteria: comprehensiveness, richness in activity, exemplary, and accessible, appropriate, and feasible. Compared to conventional modes of learning where knowledge is transmitted from teacher to student, students construct their own understanding of the topic as learning progresses. Thus, teachers were careful to provide opportunities before the start of the unit to cultivate student interest in the topic and flexibly adjust the curriculum through "Mitori" (to perceive, to understand the learning of students) based on the understanding that curriculum is "history" not a rigid, predetermined "plan". Tools and design principles that enhance integration were also identified. These were: placing verbal activities to "converge" learning at regular intervals, use of curriculum mapping and facilitation graphics to visualize connections, and deliberate practice based on a developmental perspective.

For teachers interested in starting or developing their own practice, the results should provide ideas for how to better structure their practice. As the cases studied gradually developed their practice over many years, it is recommended that teachers begin small and scale their practice as they build experience and skill. Returning to the objective of this research, ESD could indeed be a mode of teaching and learning through which learning could be made "whole". If researchers, practitioners, and policy makers perceived ESD through such a lens, full integration of ESD into school education may finally be achieved. On a final

note, there are important limitations to this research that illuminate possible directions for future research. The exceptional nature of practices studied imply that the context in which they were practiced may have played an important role in facilitating the characteristics of practice structures identified as important. To further generalize findings and to scale these practices, research on the context specificity of findings and the constraint structures in which teachers operate is needed. The study was also limited in its time frame. Whether these approaches really do make learning whole and how they effect students' dispositions towards learning could be assessed through a comparative study that spans multiple years.