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Born in Shandong Province, China, Yanfang Zhang specialised in international trade and worked in international trade at the Chinese branch of a Japanese trading company before coming to Japan. Zhang came to Japan with a passion for Japanese wabi and sabi and studied design, earning a master's degree from Tokai University and a doctorate in art and engineering from Kyushu University. From 2008 to 2015, Zhang was in charge of universal design and international design work at the design company GA-Tap, where she gained a lot of experience in design, including the Hakata Station Shinkansen signage project and the universal design of Fukuoka Bank together with her colleagues in the design team, from 2015 to present. At Kyushu University, Zhang is in charge of work such as Innovation Studio Fukuoka, Universal Design for Fukuoka City Science Museum and Design for SDGs, where she is responsible for regional cooperation and social implementation of research results. In September 2017, Zhang established 4 All Design Inc. to change society through universal design and matching excellent Japanese design with the vast design market in China. Zhang would like to continue working with my colleagues, dream big and contribute to society through design.

A Study on the Commonalities and Differences between Participatory Design Practice Projects and Participatory Design Education Programs

Dr. Yanfang Zhang

Abstract

This paper bridges the author's dual experiences as a universal design practitioner and an educator focused on Sustainable Development Goals (SDGs). It examines the transformative potential of integrating participatory design methods with SDGs-based design education to address societal challenges. Drawing from seven years in industry and eight years in academia, the author explores strategies for harmonising practice and education, emphasising a commitment to the principle of "No one will be left behind." The paper emphasises the use of participatory research methods to foster mechanisms for engaging diverse stakeholders and to create interactive learning environments. It also promotes the acquisition of practical skills through prototyping and the evaluation of outcomes, aiming to cultivate designers capable of delivering sustainable and inclusive solutions. Such efforts contribute to achieving the SDGs and advancing the culture of societal design while expanding the societal impact of the next generation of designers.

Keywords: *SDGs, Design Project, Design Workshop, Design Method, Participatory Research Method*

1. Introduction

After obtaining a Ph.D., the author worked as a universal designer for seven years at a design company. During this time, the author collaborated with diverse groups of people, including individuals with disabilities, the elderly, and foreigners, while conducting on-site investigations for various design projects. Subsequently, the author returned to university and, for the past eight years, has been actively engaged in SDGs-related projects, including designing SDG initiatives, building networks, and creating platforms, while also contributing to research and education.

This paper integrates insights gained through practical experience as a designer and as a design educator. It aims to examine the role of design in solving social challenges. The core of this examination is the participatory approach and the principle of "leaving no one behind," which is central to both universal design practices and SDGs-based design education. The paper will analyse how these initiatives contribute to the realisation of societal design. Drawing from these experiences, the paper explores the potential for future contributions to design research and education and the broader social impact of these approaches.

2. Universal Design Project

Since 2008, the author has worked as a designer on many universal design projects, such as those for Fukuoka Bank, public sign systems, JR West Japan's Hakata Station, and Fukuoka City Children's Hospital. The author briefly explained one of these universal design projects, the Fukuoka City Children's Hospital. The project involved designers from various fields, such as architecture, landscape, space, and graphic design, as well as students from local elementary and middle schools, volunteers, and hospitalised

children and their families. It aimed to reduce both the physical and psychological burdens on children with illness. A total of 1,000 students from elementary and middle schools created materials, which the designers used to craft stories and integrate them into the hospital space.
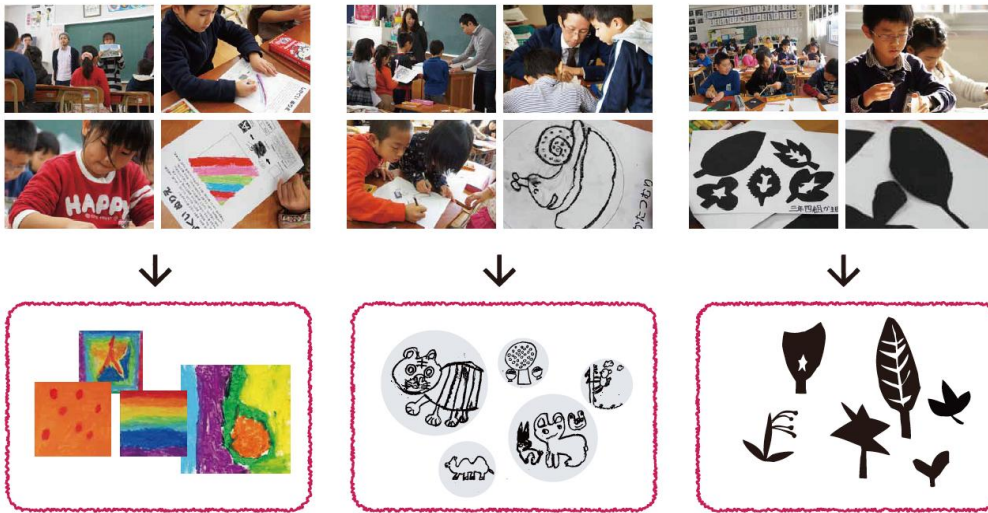

Image 2.1 Fukuoka City Children's Hospital Project Ideation Workshop

Image 2.2 Fukuoka City Children's Hospital Design 1st Floor

Image 2.3 Fukuoka City Children's Hospital Design 4ᵗʰ Floor

3. SDGs Design Education Program

In 2015, the author joined the Graduate School of Design at Kyushu University and began expanding research and education related to design. Through initiatives like the Global Goals Jam (GGJ) and the SDGs Design International Awards for students worldwide, the author has been actively involved in SDG-focused design education activities. Specifically, the GGJ is a two-day international public-participatory workshop aimed at considering sustainability from a global perspective and generating local solutions to SDG challenges.

Image 3.1 SDGs Design Workshop Prototyping in 2016

Image 3.2 SDGs Design Workshop Pitching Session in 2017

Image 3.3 SDGs Design Workshop 2019 Video

4. Findings

The common approach in design practice projects and SDGs design education initiatives is participatory. This paper uses Participatory Research Methods (Duea, et al. 2022; Mclntyre, 2007; Vaughn, 2020) to examine the commonalities and differences between participatory design projects and participatory SDGs initiatives based on the processes involved.

Process	Commonalities	Differences	
		Universal Design Project	SDGs Design Education Program
Problem Definition and Goal Setting	- Reflects the opinions of diverse stakeholders and defines the issues - Participants play a central role in goal-setting	- Focuses on solving specific product or service-related problems - Goals are concrete and short-term	- Goals are broad, including social and environmental sustainability, with a long-term perspective - Focus on policy and societal impact
Participant Selection	- Emphasizes diversity, including all relevant stakeholders - Voices of users and beneficiaries are central to the process	- Focuses on specific user groups (e.g., people with disabilities, elderly) - Small-scale, focused on specific communities (Image 4.1)	- Involves stakeholders across various sectors and countries - Includes policymakers, NGOs, and experts in the process (Image 4.2)
Idea Generation and Prototyping	- Uses participatory workshops and design sprints to	- Prototypes are created and iteratively improved	- Includes pilot implementation of policies or programs

	co-create solutions through trial and error	through short cycles - Rapid prototyping is emphasized	- Aimed at making large-scale changes and achieving broader impacts
Implementation and Feedback	- Observes actual usage and impact and reflects feedback in the next phase - Emphasizes a feedback loop for continuous improvement	- Adjustments are based on user experience, reflecting improvements in real-world applications	- Evaluates societal impact or community-wide outcomes - Feedback is used to make adjustments to large-scale policies or initiatives
Outcome and Impact Evaluation	- Evaluates outcomes both quantitatively and qualitatively, identifying success factors and challenges	- Performance and satisfaction of products or services are often the evaluation criteria - Focuses on user satisfaction and functionality	- Evaluation is based on broader criteria such as sustainability, social inclusion, and environmental protection - Focuses on societal impact and long-term contribution

Table 1. The commonalities and differences between participatory design projects and participatory SDGs initiatives
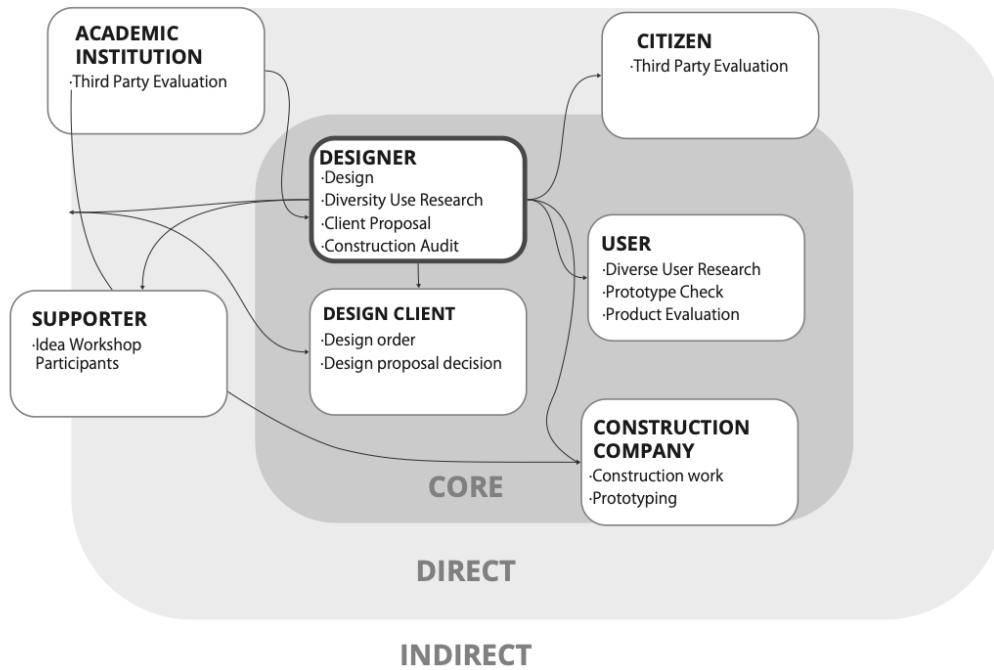
UNIVERSAL DESIGN PROJECT STAKEHOLDER

Image 4.1 Stakeholder of Universal Design Project
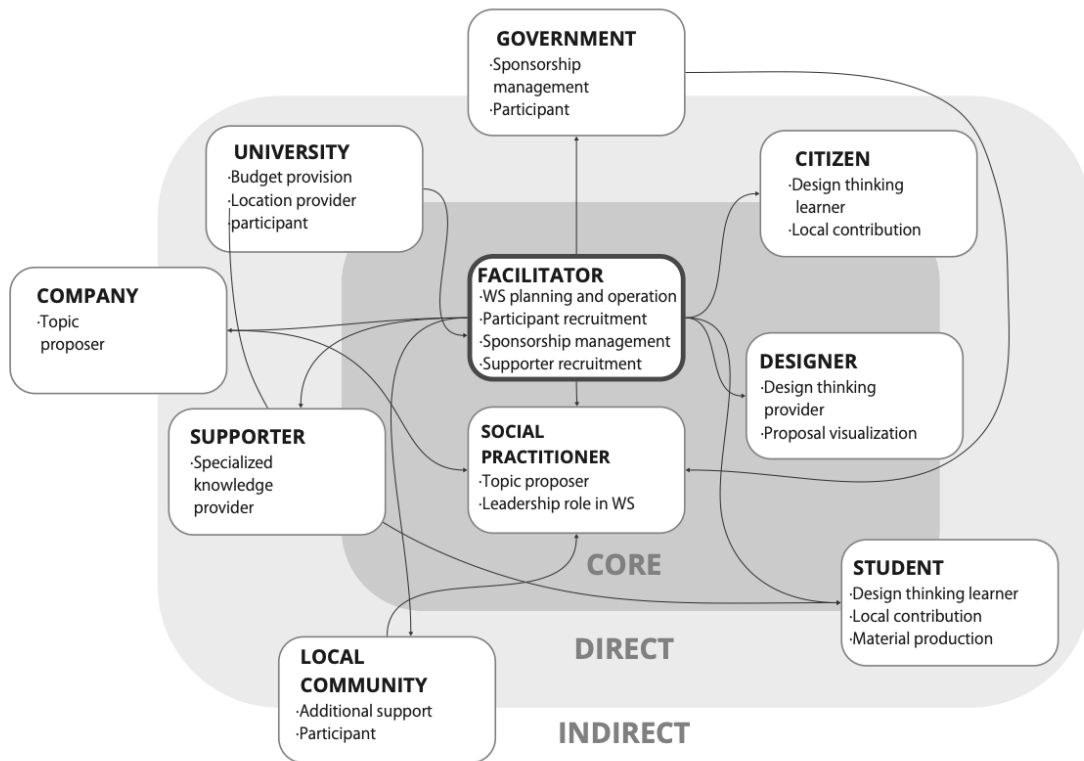
SDGs DESIGN WORKSHOP STAKEHOLDER

Image 4.2 Stakeholder of SDGs Design Program

4.1 Reflection on Commonalities and Differences

The shared emphasis on participant agency and collaborative processes underscores the participatory nature of both design projects and SDG initiatives. However, the differences reveal the distinct scopes and objectives of each approach. Design projects tend to address concrete, short-term challenges, while SDG initiatives aim for broad, long-term social transformations. These distinctions are reflected not only in their processes but also in their outcome evaluation criteria. By understanding and leveraging these insights, future integration of participatory methods in both fields can be tailored to meet the unique demands of each context, enhancing their effectiveness and societal impact.

5. Conclusion

To effectively integrate design practice with design education, a new approach is needed that centres on addressing societal challenges and enhancing participatory methods. At the initial stage of problem identification, it is crucial to incorporate the context of the Sustainable Development Goals (SDGs) into education and strengthen the focus on societal perspectives. Specifically, training should enable students to clearly define problems based on local communities or policy contexts, using project-based learning that closely resembles real-world scenarios. This approach helps bridge the gap between educational settings and practice, fostering more impactful and concrete initiatives.

In the selection of participants, standardising methods for involving diverse stakeholders is essential. Educational curricula should include practical techniques such as interviews, observational studies, and co-creation workshops— foundational elements of participatory design. This ensures that students

acquire skills directly applicable to real-world challenges. Moreover, engaging with participants from various cultural and professional backgrounds fosters multicultural perspectives and enhances communication skills, both critical for addressing global issues.

The collaborative process requires integrating educational feedback mechanisms. Throughout the project's lifecycle, regular reviews of outcomes should be conducted, enabling students and practitioners to learn from each other. Establishing this bidirectional learning environment maximises the educational value of the entire process. Such an approach allows students to experience real-time improvements and skills development, promoting the seamless integration of practice and education.

At the implementation stage, it is important to emphasise prototyping in design education. Providing opportunities for students to test ideas quickly in real-world contexts and learn from their failures develops their problem-solving capabilities as practitioners. By iteratively refining prototypes, students can gain hands-on experience in addressing on-the-ground challenges, fostering a deeper understanding of practical design approaches.

Finally, in the evaluation phase, integrating methods to measure the social impact of design outcomes is imperative. Students should learn to evaluate their work using both quantitative and qualitative measures, focusing on aspects such as sustainability and social inclusion. Post-project evaluation sessions involving stakeholders can help students comprehend the broader societal implications of their design efforts and prepare them for future initiatives.

By implementing these strategies, a seamless integration of design

education and practice can be achieved, nurturing the next generation of designers who are both practically skilled and socially conscious. This approach supports the development of a new design culture founded on the shared commitment to the principle of "leaving no one behind," a core value of both participatory design and the SDGs.

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