

# Cultural Differences in Creativity: Comparing Western and Japanese Approaches to Innovation in Education

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## Abstract

Innovation has become increasingly important in education, accompanied by growing attention to the cultivation of creativity. In innovation theory, Schumpeter's concept of "creative destruction" has played a foundational role, and scholars such as Mokyr, Aghion, and Howitt have contributed to theoretical frameworks explaining innovation-driven economic growth. However, creativity concepts in such theories may not be universally applicable across cultural contexts. In 2022, OECD's PISA introduced an assessment of Creative Thinking; however, Japan did not participate, possibly reflecting cultural differences in how creativity is conceptualized and evaluated in education. This study examines Western and Japanese conceptions of creativity through comparative literature review. Western creativity, represented by Schumpeter's radical innovation and Thiel's "zero to one" (0→1) concept, prioritizes originality and creating new value through additive processes. In contrast, Japanese creativity reflects "subtractive aesthetics" observed in haiku, Zen gardens, and Zen philosophy, where essence is extracted by eliminating excess—a "one hundred to one" (100→1) approach. The findings suggest Western additive creativity versus Japanese subtractive creativity. While sharing common elements, they differ significantly in cultural foundations, indicating creativity in innovation is not culturally uniform. This has important implications for education, suggesting culturally responsive pedagogical approaches and international assessments acknowledging diverse conceptualizations are essential for fostering creativity in globally interconnected contexts.

**Keywords:** additive creativity; creative thinking; cultural context; PISA; subtractive creativity