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CURIOSITY-DRIVEN ENGAGEMENT IN CITIZEN SCIENCE: INVESTIGATING GENDER AND MAJOR DIFFERENCES IN INNOVATION AND SELF-EFFICACY

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Abstract

This study examines the interrelationship between curiosity, science service innovation, self-efficacy, and the continuation intention in citizen science among 226 undergraduate students in Taiwan, including both Science and non-Science majors. All participants had at least two years of citizen science experience. Using structural

equation modeling and confirmatory factor analysis, the study explores how curiosity influences students' intentions to continue engaging in citizen science through the mediating roles of innovation and self-efficacy. Additionally, this research investigates gender differences and variations between Science and non-Science majors in terms of science service innovation and self-efficacy. The findings indicate that both innovation and self-efficacy serve as crucial mediators in the relationship between curiosity and the intention to persist in science-related activities. These results highlight the significance of fostering curiosity, promoting innovative practices, and enhancing self-confidence to sustain student involvement in citizen science initiatives. This study contributes to discussions on effective teaching and learning strategies in higher education by emphasizing the importance of cultivating curiosity-driven engagement. By integrating innovative approaches and strengthening self-efficacy, educators can encourage long-term participation in science-related activities. The findings offer practical insights for designing educational interventions that enhance students' motivation, particularly in science fields. Encouraging curiosity and fostering confidence in scientific endeavors can play a pivotal role in shaping future generations of engaged and innovative contributors to citizen science.

Keywords: Citizen Science; Curiosity; Innovation, Self-Efficacy