

TEACHING ROBUST UNDERSTANDING (TRU) BASED LECTURES TO DEVELOP STUDENT CREATIVITY AND RESILIENCE

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ABSTRACT

This study aims to obtain a conceptual definition and an operational definition of mathematical creativity and mathematical resilience. This research also develops a TRU-based applied mathematics lecture model that is expected to increase students' mathematical creativity and mathematical resilience.

This research was conducted by studying the literature and conducting a systematic literature review by examining reputable literature review articles to obtain conceptual and operational definitions of mathematical creativity and mathematical resilience. Furthermore, a TRU-based applied mathematics lecture model development was designed which is expected to increase students' mathematical creativity and mathematical resilience.

The creativity used in applied mathematics lectures is the ability to think creatively mathematically, namely the ability of individuals to determine strategies for solving mathematical problems from different perspectives and fulfill 4 aspects, namely fluency, flexibility, originality, elaboration and defining the problem. The resilience used in applied mathematics lectures is survival ability, adaptability, and mathematical ability, having self-confidence, and having a growth mindset, being diligent, persistent, and having a quality attitude, facing difficulties, considering continuing to develop, constructive nature, confident in success, the desire to research something, and the desire to discuss. TRU is a set of attributes of a just and robust learning environment—one in which all students are supported to become disciplined thinkers who are knowledgeable, flexible, and resourceful. The TRU lecture model which is oriented towards developing student creativity and resilience is given in Figure 6.

Kata Kunci: *Mathematical creativity, mathematical resilience, TRU*