

LEARNING TRAJECTORY DESIGN WITH A REFLECTIVE REALISTIC MATHEMATICS APPROACH IN PROBABILITY MATERIAL ORIENTED ON STUDENTS' CREATIVE ABILITIES IN THE 21ST CENTURY

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ABSTRACT

The purpose of this research is to produce a learning trajectory design with a reflective realistic mathematics approach in probability material that is oriented towards students' creative abilities in the 21st century. The background of this research is the importance of the role of mathematics in facing global competition in the 21st century so that each individual can become a good and creative problem solver. This causes the need for innovation in the development of learning trajectory designs in mathematics learning, especially in probability material through a reflective realistic mathematics approach that can accommodate students' creative abilities. This research uses a design research development model which consists of three stages, namely research preparation, research design implementation, and retrospective analysis. The learning trajectory design consists of three components, namely didactical phenomenology through the ladder of faith, self-developed models using a spinner board, and guided reinvention and progressive mathematization using the excel program. Each learning activity ends with a reflection by the students. The learning design can facilitate students' creative abilities which include four aspects, namely fluency, flexibility, originality, and elaboration. The revised learning trajectory can be piloted in a wider scope.

Kata Kunci: *learning trajectory design, reflective realistic mathematics approach, probability material, students' creative abilities*