

Extrapolation method and its application in forecasting at high school level

Tran Thi Dieu Thuy

Abstract: This study investigates extrapolation methods and their application in forecasting within the context of Vietnamese high school education. Extrapolation, a mathematical technique for estimating values beyond a known data range, is often underutilized in secondary curricula despite its practical relevance. The research explores how integrating extrapolation-based forecasting into mathematics instruction can enhance students' analytical and predictive skills. Through a mixed-methods approach involving classroom interventions and assessments, the study evaluates the effectiveness of teaching linear, polynomial, and exponential extrapolation models for real-world problems, such as population growth and economic trends. Findings indicate that students exposed to these methods demonstrate improved logical reasoning and ability to make data-driven projections. The study also addresses common misconceptions and pedagogical strategies to overcome them. By bridging theoretical mathematics with practical forecasting, this research contributes to curriculum development and offers educators a framework for fostering critical thinking. The results underscore the potential of extrapolation as a tool for preparing students for data-intensive decision-making in higher education and future careers.

Keywords: extrapolation, forecasting, high school, application