CLUSTER INNOVATION CENTRE
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Exploring the integration of Zoltan Dienes Theory of Learning Mathematics in the foundational stage textbooks

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Abstract

This dissertation investigates the alignment between Zoltan Dienes' theory of learning mathematics and the National Council of Educational Research and Training (NCERT) mathematics textbooks for Class 1 and 2 (foundational stage) in India. The study is conducted within the framework of the National Education Policy (NEP) 2020 and the National Curriculum Framework for Foundational Stages (NCFFS) 2022, which emphasize play-based, discovery, and activity-based learning in foundational mathematics education. Dienes' theory proposes six stages of learning and highlights the importance of active engagement in building mathematical understanding. This dissertation examines how well these principles are reflected in the NCERT textbooks, which are a primary resource for young learners. The findings of this research will be valuable for educators, curriculum developers, and policymakers seeking to improve the quality of mathematics education in India's foundational years. By analyzing the alignment between theory and practice, the study aims to bridge the gap and contribute to the ongoing efforts of NEP 2020 and NCFSE 2022 to enhance student learning outcomes. This research has the potential to inform the development of more effective instructional strategies for foundational stage teachers and ensure a more meaningful learning experience for young learners. It can also guide curriculum development and potentially lead to teacher training workshops to ensure successful implementation of Dienes' theory in Indian classrooms.

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